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ABSTRACT

Past and current impacts of the supply of foreign medical graduates (FMGs) on the total physician supply and on the availability of physician services are reviewed, and the possible future role of FMGs is forecasted. The relationship of the levels and changes in FMG supply to legislative decisions of the past three decades is also addressed, with attention to post-World War II legislation, the Immigration and Nationality Act of 1965, legislative changes in the mid-1970s, the Health Professions Educational Assistance Act of 1976, and recent legislation. The numerical impact of FMGs on specialty distribution, activity distribution, and practice location is analyzed, and information is provided on the performance of FMGs on standard qualification examinations. The activity and specialty patterns and practice locations of U.S. citizen FMGs are also assessed. Over the 1970-1979 period, FMGs constituted about one-fifth of the annual active physician supply, but accounted for one-third of the growth in physician supply. It is estimated that the FMG supply will grow at a slower rate in the future than in the past: by about 35% between 1981 and the year 2000, with most of the growth occurring in the early years of the period as a result of the return of U.S. FMGs to the United States. (SW)

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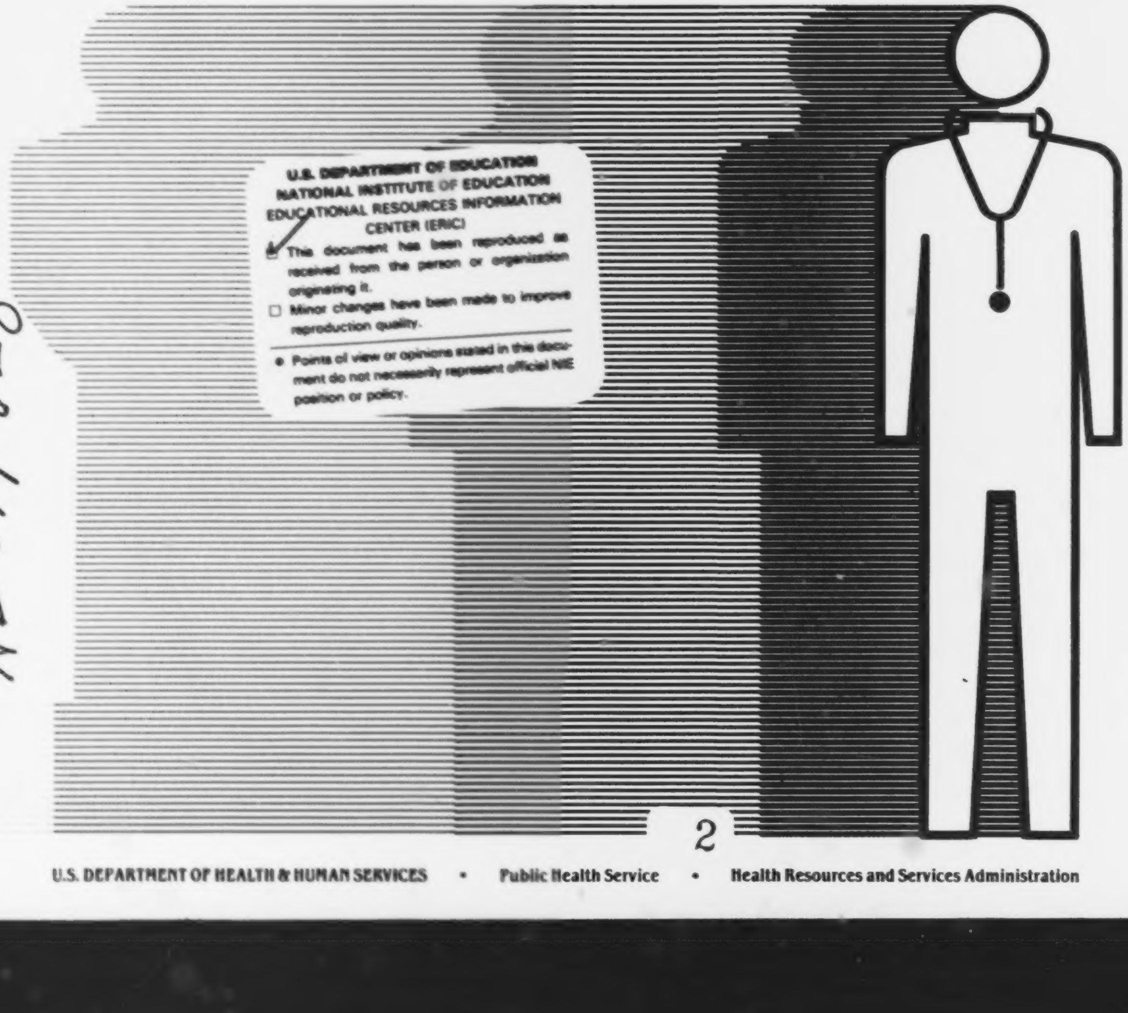

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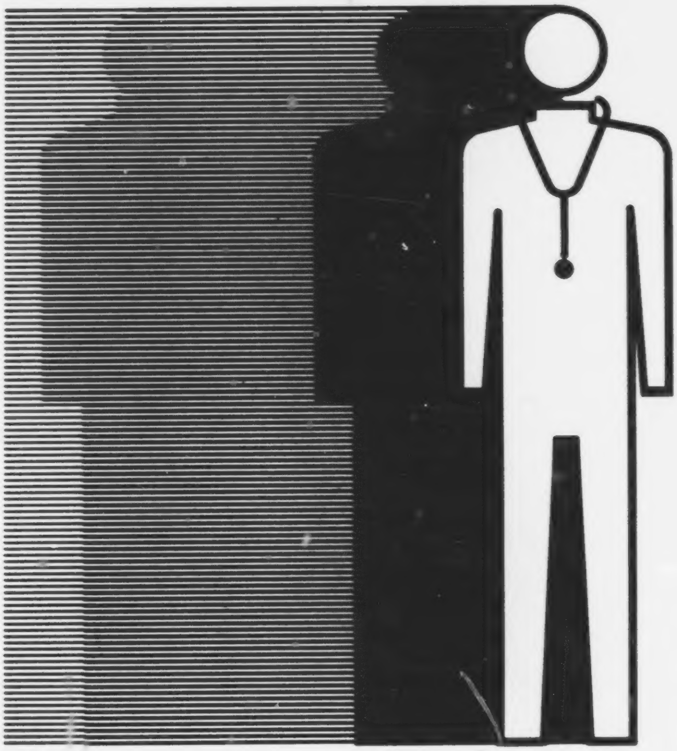
The Impact of Foreign-Trained Doctors on the Supply of Physicians



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U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
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Foreword

A major function of the Bureau of Health Professions, Health Resources and Services Administration, is to determine the future supply of health professions personnel that will be available and required to meet the Nation's health care needs. Within the Bureau, the Office of Data Analysis and Management (ODAM), formerly the Division of Health Professions Analysis (DHPA), serves as the focal point for coordination of these and other analytical activities, including providing guidance and technical assistance in health professions modeling in order to improve the Agency's supply and requirements forecasting capability.

Determining and understanding the current characteristics and health care delivery patterns of practicing physicians in the United States are difficult, and projecting future patterns is even more difficult. One factor contributing to this is the current and future role of the foreign-trained physician--the FMG. This component or subset of medical personnel has represented about one-fifth of the total supply of physicians during the past decade. The FMG's historical flow into and out of the health care system is caused by several different and often divergent factors. As a result, understanding the role that this segment of the physician supply plays in the provision of health care is an important aspect of understanding the U.S. health care system.

This report reviews the past and current impact of the supply of FMGs on the total physician supply and on the availability of physician services, forecasts their possible future role, and reports on the relationship of the levels and changes in the FMG supply to the legislative decisions of the past three decades. It also documents the methodology underlying the projections presented in the Third Report to the President and Congress on the Status of Health Professions Personnel in the U.S. The actual projections presented in the present report are slightly different since they incorporate more recent data than were available at the time that the Third Report was prepared. Finally, this report updates some of the information originally collected and interpreted in two Public Health Service monographs of the early 1970s entitled Foreign Trained Physicians and American Medicine by Rosemary Stevens and Joan Vermeulen, and Foreign Medical Graduates and Physician Manpower in the United States, prepared by Betty A. Lockett and Kathleen N. Williams.

It is hoped that this report will contribute to an expanded and improved understanding of the role of foreign-trained physicians in American medicine.

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Glossary

The developments, laws, regulations, and qualifications pertaining to FMGs are complex, difficult to understand and not agreed upon. The complexity of this report's analyses and findings clearly attests to that fact. As a result, a handy glossary of the terms used in this report has been presented. This follows:

FMG: a graduate, U.S. citizen or a non-U.S. citizen, of a foreign medical school; a physician whose basic medical degree or qualification was conferred by a medical school outside the U.S., Puerto Rico, and Canada that is listed in the World Directory of Medical Schools

USFMG: an FMG who is a U.S. citizen

Alien physician: an FMG who is not a U.S. citizen

USMG: a graduate of a U.S. medical school

EVFMG: an exchange visitor graduate medical education participant, that is, an alien physician who is studying in a U.S. residency program who intends to return to his (her) native country after completion of training

GME: graduate medical education

ECFMG: Educational Commission for Foreign Medical Graduates, a Philadelphia-based organization responsible for providing graduates of foreign medical schools with information about training programs, requirements, and appointment procedures for residents in U.S. hospitals and certifies the credentials of such aliens

J-visa: a visa provided to aliens who wish to enter the U.S. on a nonimmigrant basis for training and to remain until finished with their studies

H-visa: a visa provided to aliens of distinguished merit and ability, who are invited by an institution for teaching and/or research, who wish to enter the U.S. and subsequently return to their native country

SMSA: Standard Metropolitan Statistical Area

Chapter I

Summary

Since World War II there have been significant changes in the education patterns of physicians practicing medicine in the U.S. As the number of U.S. citizens seeking a medical education outstripped the number of openings in U.S. medical schools, more and more U.S. citizens sought and obtained a medical education abroad--2,056 in 1955 but nearly 12,000 by the end of the 1970s. At the same time, the number of foreign citizens in U.S. medical schools--only a few hundred in 1955--also increased, but not nearly as rapidly. These events occurred even though there was an increase of 34,000 enrollees in U.S. medical schools over the period.

After the passage of The Smith-Mundt Act of 1948, the number of foreign citizens in the U.S. medical education system increased substantially as aliens used the new exchange visitor visa category to participate in graduate medical education. This program provides training opportunities in U.S. residency programs to graduates of foreign medical schools who intend to return to their native countries. By the mid-1950s and through 1960, first year participants in this program alone nearly equalled the total number of U.S. citizens in foreign schools--1,700 new entrant exchange visitors in U.S. residency programs in 1955 as compared with a total of 2,056 U.S. citizens enrolled in foreign medical schools.

During the 1960s the demand for medical care in the U.S. increased substantially. Since U.S. medical school output did not keep pace with this demand, a physician "shortage" became a major concern. The migration of foreign trained physicians served as an increasingly important source of practitioners to meet this demand, particularly in the hospital setting. Consequently, the exchange visitor program became a point of entry into the U.S. for these physicians. By 1970, the number of new entrant exchange visitor foreign medical graduates (EVFMGs) had risen to 5,008 while the total number of U.S. citizens studying medicine in foreign schools increased to 3,922. The total impact of the program was actually larger than these numbers indicate because many of the EVFMGs later converted to permanent immigrant status.

In 1965, Congress enacted major changes in the immigration laws. The national preference quota system was replaced, and high priority visas were established for occupations considered to be in short supply. These changes clarified the various portals of entry available to FMGs who desired to participate in the U.S. medical care system, and their net effect was to substantially increase the immigration of physicians.

During the 1970s two major concerns arose: (1) that there would be a draining of resources from the Asian and developing nations; and (2) that the quality of practice in the U.S. of these aliens would be inferior since many of them had scored low on their qualifying examinations.

A list of countries in which physicians were in short supply in 1970 was requested by the Department of State; the intent was to make sure that physicians in the U.S. from those countries would be required to return to their homelands. However, before the list was available in 1972, large numbers of EVFMGs had changed their immigration status from temporary to permanent reaching as high as 4,400 in 1972; these EVFMGs were primarily from Asian or developing nations.

In 1975 the Educational Commission for Foreign Medical Graduates (ECFMG), the organization designated by the Department of State to certify the credentials of aliens seeking graduate medical education, attempted to address the quality issue. The entrance screening exam for alien participation in U.S. graduate medical education was changed to assure that alien doctors had command of the English language. This new requirement, coupled with the faster growth in U.S. graduates than of graduate medical education positions, resulted in a decline in the number of aliens participating in the exchange visitor program. However, total immigration increased slightly because of an increase in the number of aliens permanently immigrating, both as new entrants and as status changers.

In 1976 Congress passed the Health Professions Educational Assistance Act. One of its provisions was designed to limit future immigration by imposing a more demanding entrance exam. In 1977, the Congressionally mandated restrictions on graduates of foreign medical schools were in force. Despite waivers of the restrictions being in effect the first year, there were changes in the mix of foreign medical graduates entering the U.S. Initially, the number of permanent immigrants increased, primarily because of an increase in the number of temporary visitors changing their immigration status. This increase counterbalanced a drop in new entrant EVFMGs. However, by the next year, 1978, the number of permanent immigrants had dropped below even the 1976 figure to the 1974 level of about 4,400. This reduction occurred because only family preference aliens remained exempt from the entrance exam. Still, the overall impact of P.L. 94-484 on FMG immigration was much less than expected, reducing only somewhat total FMG participation while redistributing to a minor degree the mix of nationalities of the new entrants. The effect that this change in the mix of alien FMGs is likely to have on their location, specialty, and practice preferences is still not well understood. Also in 1978, the number of U.S. citizens studying medicine abroad reached new heights. By 1979, USFMGs, a component of the FMG total, numbered over 9,000 and represented about 11 percent of all FMGs practicing in the U.S.

Legislation passed by Congress in 1981 may serve to increase FMG immigration since it alleviates some of the previous restrictions, particularly by increasing the the length of stay for temporary visitors. However, the entry of FMGs into the medical care system is likely to become increasingly difficult because of the introduction of a new exam, scheduled to be administered in 1984.

Current Practice Picture

A review of the literature and an analysis of trend data show that FMGs have had significant numerical impact on the total supply of physicians.

Over the 1970 - 1979 period:

FMGs represented a substantial and increasing segment of the supply of physicians in the U.S.

- Not only did they constitute about one-fifth of the annual active physician supply, but they accounted for one-third of the growth in physician supply. Moreover, this growth was not uniform across settings. FMGs accounted for two-thirds of the growth in full-time physician staff in hospital-based practice, but two-fifths of the growth in office-based practice.

- FMG participation in psychiatry, surgery, and general practice did not increase as fast as did total FMG growth. However, FMG participation in internal medicine more than doubled and increased more rapidly in pediatrics, obstetrics-gynecology, anesthesiology, and radiology than did overall FMG growth.

- FMGs contributed significantly to the growth in physician supply in rural areas. They amounted to nearly 40 percent of the overall physician expansion in non-metropolitan areas.

- FMGs received nearly half of the initial licenses issued in the early 1970s and a third or more of those issued in the middle 1970s. These proportions fell to less than one-quarter in 1978 and less than one-fifth in 1979. However, FMGs accounted for one-third to more than one-half of the new licentiates in eight states in 1979. The drop in FMG new licentiates between 1976 and 1979 was entirely in eight States, while three States had steady increases.

- Although FMGs constituted about one-fifth of the Nation's supply of physicians, they accounted for about 30 percent of the physicians in seven states in the Midwest and on the east coast.

The Impact of USFMGs:

- The practice profile of USFMGs lies between that of USMGs and alien FMGs. Like their foreign-born counterparts, a relatively larger proportion of USFMGs are hospital staff physicians than are USMGs; on the other hand, like USMGs a relatively larger proportion are engaged in office-based practice than alien FMGs.

- USFMGs generally do not favor the traditionally "FMG-preferred" specialties. Exceeding the respective percentages for both alien FMGs and USMGs, more than four out of ten USFMGs are primary care specialists.

- More than 60 percent of all USFMGs locate their practices in New York, New Jersey, California (not as popular a state for alien FMGs), and Puerto Rico, with 32 percent in New York alone.

The Future

Using historical data through 1981, an analysis of existing legislation and several different assumptions, it is estimated that the FMG supply will grow at a slower rate in the future than in the past--by about thirty-five percent between 1981 and the year 2000--with most of the growth occurring in the early years of the period as a result of the return of USFMGs to this country.

By 1990, approximately one-third (31-35 percent) of these FMGs are expected to be practicing in one of the primary care specialties, somewhat less than the proportion in 1981. Graduates of U.S. medical schools are expected to choose primary care practice at a greater relative rate than FMGs; however, total primary care participation among physicians is expected to be slightly less in 1990 than in 1981. It is difficult to predict whether this new pool of FMGs, with somewhat different countries of origin for the aliens and with a greater percentage of USFMGs, will follow the same pattern as FMGs have in the past. Analysis of the current supply of USFMGs indicates that the specialty choices of these physicians are generally more similar to those of USMGs than to those of alien FMGs.

Still, considering past behavioral patterns and the most-likely future demands for services, FMGs will likely continue to complement the USMG practice patterns, continuing their significant numerical contribution to the delivery of health care in the U.S. In addition, the quality of medical care provided by FMGs will likely be enhanced in future years because the improved criteria for medical credential qualification (Visa Qualifying Examination (VQE)) should have allowed only the most qualified aliens into the U.S. health care delivery system. Furthermore, a new single credentialing process for all alien physicians, regardless of citizenship or visa status, which has been recommended by the General Accounting Office, and which will be first administered in July, 1984, as the Foreign Medical Graduate Examination in the Medical Sciences, will likely serve to further improve FMG qualifications. This new examination, however, poses some additional uncertainty about the future of the FMG supply.

Chapter II

Legislative Background: The Laws and Their Impact

Introduction

During the nineteenth century, Europe, with its superior educational facilities, attracted many American medical students. But in this century, because of the revamping of American medical education following the 1910 Flexner report, coupled with advances in scientific and technological methods and the effects of the devastating world wars in Europe, the educational focus of the profession shifted to medical schools in this country.

After World War II, what had been a minor movement of European-trained physicians and medical students to this country became a major exchange program as Congress sought to deal with, first, the tragedy of the war and, second, with the various health care needs of both the U.S. and the foreign countries.

Students and scholars from other nations, among whom were individuals interested in undergraduate medical education, were welcomed into the U.S., while American students were encouraged to study abroad. The purpose was to dissipate the war tensions and to cultivate friendly understanding among the world's population. France Scott Smith, then Dean of the University of California School of Medicine, explained: "If peace is to be more than the absence of war, international education must be developed wherever possible."[1]

Post World War II Legislation

The Surplus Property Act of 1944 called for the sale of all American surplus property left in foreign countries after the war and for converting the revenues from these sales into credits in the respective countries. Two years later, Congress enacted Senator J. William Fulbright's amendment to the Act. Under this Amendment, the State Department was authorized to dispose of the surplus property and began a program of international educational exchange which provided funds from the sale of the surplus property to train both American students in foreign schools and foreign students in American schools.

In terms of medicine, however, the Fulbright Amendment served more to introduce the concept of an international exchange in education rather than directly to benefit medical students, either American or alien. Little money was allotted for medical education, and the real impetus for Americans to study medicine abroad in the postwar years was the slow expansion of medical schools in this country at a time when the G.I. Bill was greatly increasing the number of applicants. In 1948, first-year enrollment in American medical schools was 6,688, a figure which had not changed much in the previous 20 years. During the next 20 years, the first-year enrollment figure rose slowly, to 9,863 -- primarily due to a 20 percent increase in the number of

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[1] Smyth, Francis Scott. "Our International Responsibility in Medical Education," Journal of Medical Education 26:360-3, September, 1951.

American medical schools which took place largely in the 1960s.[2] As a result, considerably more U.S. citizens studied in foreign medical schools than did foreign students study in American schools in the postwar years (table II-1).

The Smith-Mundt Information and Educational Exchange Act of 1948 addressed the imbalance in this exchange of students between the U.S. and other nations. This legislation augmented funding for educational exchange by appropriating Federal dollars to open American universities to foreign students in the same way that the Fulbright Amendment had for American students in foreign universities. The Act also established a new visa category--the exchange visitor or J-visa--which allowed aliens who wished to study full-time in the U.S. to enter the country on a nonimmigrant basis and remain in the U.S. until the completion of their studies. Since places in U.S. medical schools were limited, the Act served to support the exchange program at the graduate level. By the mid-1950s, the effect of the Act was evident in the balance between the number of new entrant exchange visitor participants in the graduate medical education program and the nearly equal total number of U.S. citizens studying medicine in foreign schools.

By the mid-1950s, however, many J-visa recipients were extending their visit in the U.S. beyond the time required to complete their training. They would apply for a change of status and then continue to work in the U.S. as temporary visitors ostensibly here for training, while actually competing for a permanent visa. More significantly, the exchange visitor program served as

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[2] "Medical Education in the United States, 1968-1969," Journal of the American Medical Association, 210:8, November 24, 1969.

Table II-1. Trends in the Number of Permanent Immigrant, Exchange Visitor, H-visa, Physicians and Surgeons Admitted to the U.S., Adjusters of Status from Temporary to Permanent, Foreign Citizens in U.S. Medical Schools, and U.S. Citizens in Foreign Schools: 1952-1978

	Permanent Immigrants					
	Total	Change of Status	Exchange Visitors	H-visa	Foreign Citizens in U.S. Schools	U.S.Citizens in Foreign Schools
1952	1,201	NA	NA	NA	94	1,734
1955	1,046	NA	1,700 1/	NA	280	2,056
1960	1,574	NA	2,797 2/	NA	392	2,832
1962	1,797	NA	3,970	NA	425	1,929
1965	2,012	112	4,160	210	436	2,377
1968	3,128	652	5,701	296	501	3,022
1970	3,158	890	5,008	357	583	3,922
1971	5,756	2,902	4,784	407	659	3,715
1972	7,143	4,389	3,935	338	715	NA
1973	7,119	4,140	4,613	553	768	NA
1974	4,532	1,629	4,717	727	775	NA
1975	5,361	1,463	2,849	569	687	6,000
1976	6,184	1,774	2,563	524	645	NA
1977	7,073	2,425	1,578	455	732	NA
1978	4,435	2,099	951	180	746	11-12,000

1/ Estimated: 5000 total, one-third assumed to enter internships in that year. McCormack, J.E., et al, "Alien Interns and Residents in the U.S." JAMA, 158:1357-60, August 13,1955.

2/ Estimated: 8392 in training, one-third in interships--Institute of International Education.

Source: Data on Permanent Immigrants, Exchange Visitors, H-visa Aliens, and Adjusters of Status, 1952-1972 from Foreign Medical Graduates and Physicians Manpower in the U.S., DHEW (HRA) 74-30. Data for 1973-1978 from unpublished tables National Science Foundation.
Foreign citizens in U.S. schools, and U.S. citizens in foreign schools for selected years 1952-1971 from Medical Education in the U.S., JAMA, Select Years.
U.S. citizens in foreign schools for 1975 and 1978 estimated from "Policies Regarding U.S. Citizens Studying Medicine Abroad are in Need of Careful Review and Reappraisal," Draft Report, General Accounting Office, December, 1980.

an effective immigration device for physicians who otherwise would have had to compete under a quota system with thousands of other aliens from a particular nation. This was especially helpful to those aliens from countries with long waiting lists and low quotas--those from Asian nations.

Because this practice thwarted the legislation's objective to provide training to foreign students so they could then offer improved services in their homelands, Congress in the late 1950s and early 1960s sought to deal with the problem. In 1956, Congress amended the Smith-Mundt Act (P.L. 84-555) to require an exchange visitor to spend at least two years outside the U.S. before being granted permission to adjust to permanent immigrant status.[3/] This requirement, however, permitted a waiver of the two-year period if it constituted a personal hardship on the alien--in most cases, if the alien were to be separated from an American spouse--or if a waiver were in the public interest--meaning if the requesting physician was involved in work with national and/or international implications.

Further attempts to weaken the requirement by creating a separate visa category for J-visa aliens who might later wish to change their status were blocked in 1961 when Congress upheld the stipulations of P.L. 84-555 in spite of pressures from foreign physicians in the U.S. Actually, the Department of State in 1959 had already limited the exchange visitor's stay in the U.S. to

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[3/] More recently, this provision was again amended by the Health Professions Educational Assistance Act of 1976 (P.L. 94-484) in order to better enforce the departure restrictions. Currently, this clause in under further congressional scrutiny with the view of returning it to its original, more flexible status.

no more than five years. However, the response for waiver requests for both the two-year departure and five-year stay restrictions was so overwhelming and burdensome to the bureaucratic process that delays became tantamount to circumventing the immigration restrictions.

The immigration restrictions were relaxed because the exchange visitor program had come at an auspicious time for the medical education system in the U.S. The Hill-Burton Act of 1946 mandated the funding for hospital facility expansion and new construction and GI-Bill money went to hospitals willing to expand their postgraduate training programs.

The number of residencies offered in American hospitals in 1950 was four times the number offered in 1941.[4/] This growth well outpaced the number of medical school graduates available to fill the slots. Additionally, some residents were drawn into the military for the Korean War. These pressures turned the exchange visitor program into a vehicle to fill available graduate medical education slots.

The Immigration and Nationality Act of 1965 and its Impact

Because many J-visa recipients were using that status only as a way-station to permanent status--in effect, turning an international education exchange program into an immigration device, Congress enacted the Immigration Act of 1965. The major provisions of the Act were:

[4/] Freymann, John Gordon, The American Health Care System: Its Genesis and Trajectory, New York, 1974, p. 64.

1. Replacement of the national preference quota system by a first-come, first-serve policy with a uniform national ceiling and an overall immigration ceiling.

2. Establishment of seven categories for granting high priority visas--categories one, two, four, and five which gave preference to immediate family members of U.S. citizens and permanent immigrants; category three, to aliens of distinguished merit and ability; category six, to aliens in occupations declared to be in short supply in the U.S. (physicians and surgeons were included in this schedule); and category seven giving preference to refugees.

This act significantly affected the medical profession. Foreign physicians could be easily classified in either category three or category six, becoming eligible for the high priority visas. In addition, the same year the legislation was passed, President Johnson publicly announced that a significant national physician supply shortage existed, and this proclamation led to regulations facilitating an immediate exemption to physicians. The Labor Department expeditiously issued certificates to alien physicians since the Department's two conditions of certification were easily satisfied:

1. There were not enough qualified workers at the intended location of the alien; and

2. The alien's employment would not adversely affect the wages and working conditions of similar workers already employed in that area.

The Immigration Act of 1965, with its uniform quota system, also produced changes in the mix of aliens entering the U.S. The number of permanent immigrant physicians had risen from 1,200 in 1952, to 1,800 by 1962, and to only 2,000 by 1965. But by 1968, three years after the law passed, the number of permanent immigrants had increased by more than 50 percent, to 3,100. Although the majority of these aliens were new entrants, the number of status adjusters, individuals already present in the U.S., also increased dramatically, from 112 in 1965 to 652 three years later (table II-1).

By 1970 there were other changes. Although the totals for exchange visitors and for permanent immigrants varied only slightly from the 1968 figures, there were sharp increases in the change of status category, up from the 652 in 1968 to 890, and in the H-visa category (aliens of distinguished merit and ability), up from 296 to 357 (table II-1). The total number of entrant aliens in 1970--7630--thus nearly equaled the output of U.S. medical schools in that year.

Distribution of permanent immigrants by nationality also changed significantly. In 1965, 52 percent of the permanent immigrants entering the U.S. were from the Americas; slightly more than 28 percent were from Europe and 10 percent were from Asian nations. By 1968, the percentage of aliens from the Americas had fallen to 30 percent and the percentage of immigrants from European nations had fallen to 21 percent, while the percentage of Asian aliens had risen to 41 percent. By 1970, Asian alien representation of total new entrant permanent immigrants had risen to over 50 percent, and by 1975 to 70 percent (table II-2).

Table II-2. Foreign Physicians and Surgeons Admitted to the United States as Immigrants, by Region of Last Permanent Residence: Selected Years 1965-1978

Region of last permanent residence	Europe		Americas[1]		Asia		Other		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1965................	568	28.0	1,039	52.0	205	10.0	200	10.0	2,012	100.0
1968................	666	21.0	929	30.0	1,277	41.0	256	8.0	3,128	100.0
1970................	628	20.0	482	15.0	1,744	55.0	304	10.0	3,158	100.0
1974................	703	15.0	515	11.0	2,966	65.0	353	8.0	4,537	100.0
1975................	627	12.0	625	12.0	3,781	70.0	328	6.0	5,361	100.0
1976................	707	12.0	738	12.0	4,341	70.0	398	6.0	6,184	100.0
1977................	737	10.0	1,219	18.0	4,389	62.0	656	9.0	7,073	100.0
1978................	546	12.0	1,311	30.0	2,330	53.0	248	6.0	4,435	100.0

[1] Americas comprise Canada, Mexico, Cuba and South America.

Source: Scientists, Engineers and Physicians from Abroad, FY 1965-1974, National Science Foundation, Washington: Government Printing Office.

Note: Percentages may not add to 100 due to independent rounding.

The late 1960s were marked by an expansion of the preference quotas and greater flexibility in the departure restriction. For example, a physician on temporary visa status awaiting a change of status to a position in the third preference permanent visa category was permitted to remain in the U.S. and continue working until such a position opened. Such special treatment of physicians rendered the departure restriction ineffective. Increased pressure to waive the departure restriction entirely resulted in the elimination of the restriction for those individuals not supported by their governments and whose occupations were not deemed in short supply in their homelands. The dramatic increase in status adjusters in the late 1960s and a concern about draining countries of skills in short supply motivated the Congress to mandate, in P.L.91-225, that the Department of State develop by 1970, a list of "shortage countries" by occupation.[5/] Because this took longer than anticipated, until 1972, during the period 1970-1972, all exchange visitors who requested a change of status to permanent immigrant were permitted to work in the U.S. until their applications could be reviewed, regardless of the occupational status in their homelands. The delay in preparing the "shortage skills" list, therefore, promoted a dramatic increase in the number of aliens adjusting their status in 1971 and an additional boost to a level exceeding 4,000 adjusters each year in 1972 and 1973. As a result, the number of permanent immigrant visas awarded in 1972 and 1973 reached unprecedented levels, in excess of 7,000. Exchange visitor aliens averaged about 4,200 for each of the two years.

[5/] For the 1972 list of countries with physician shortages, see Foreign Medical Graduates and Physician Manpower in the United States. DHEW (HRA) 74-30, pgs. 12-13.

An additional step designed to expedite the eligibility process for permanent immigration was the development of a U.S. occupational shortage list called Schedule A. This list, developed by regulation in 1971 by the Labor Department, purposefully excluded occupations believed to be in oversupply in the U.S., such as auditors, chemists, and physicists. The Schedule A included, however, a number of occupations eligible for immediate certification, such as physicians who were considered to be in short supply, nationally, regardless of the intended practice location of the alien.[6/]

The "shortage skills" list by country had an impact on the number of FMG entrants in 1974 and 1975. The number of status adjusters dropped, bringing the number of permanent immigrant visas issued in 1974 down from the 7,000 figure of the previous two years to 4,500. The number of new J-visas also dropped, for the first time in the 1970s. H-visas awarded, however, rose to over 700 by 1974. Despite these changes, the composition of the alien population by national origin maintained a similar pattern to that observed earlier in the 1970s--about two-thirds from the Asian nations (tables II-1 and II-2).

The early 1970s also marked the substantial increases in the number of U.S. citizens attending foreign medical schools. With the applicant-to-acceptance ratio increasing for U.S. schools, many rejectees chose foreign training. By 1975, the number of U.S. citizens in foreign schools had increased by 50 percent over the 1970 level (table II-1).

[6/] Ibid.

The Legislative Changes in the Mid 1970s

The increasing number of alien MDs remaining in the U.S. and the change in the mix of physicians by country of origin stimulated congressional hearings in the mid 1970s on whether:

1. U.S. participation in international educational exchange had resulted in a "brain drain" from developing nations, and

2. The poorer foreign-trained examination performers were providing a noncomparable level of quality of care; in particular, there was concern about the quality of care offered by physicians from Asian nations.

The early 1970s' permissiveness toward foreign-trained physicians had changed dramatically by the middle of the decade. The medical profession, citing findings that indicated that foreign-trained physicians were providing a level of care lower than their U.S.-trained counterparts, argued that a two-class medical care delivery system composed of U.S.-trained physicians and foreign-trained physicians was being created in this country. Also, with the number of U.S.-trained physicians increasing rapidly--from 8,974 graduates in 1971 to 13,561 in 1976[7/]--at least in part due to the Federal assistance to medical schools mandated by the Health Professions Educational Assistance Act of 1963 and subsequent amendments, the medical profession said there was less need for the foreign-trained physician.

[7/] "Medical Education in the United States, 1975-1976," Journal of the American Medical Association, 236:26, December 27, 1976.

By the mid-1970s, concerns over physician shortages in specific geographic areas and specialties replaced concerns about an overall physician shortage. Research also indicated that the foreign-trained MD was contributing to geographic and specialty maldistribution by locating where U.S. medical graduates were locating rather than in shortage areas.[8/] In addition, several abuses and misuses of the existing system (creating what was referred to as a "medical underground" by employing alien physicians who were not fully licensed and were in unsupervised settings[9/]) were brought to the attention of Congress. These factors--the alleged low quality of care offered by foreign-trained physicians, the increasing supply of U.S. medical graduates, the location patterns of foreign-trained physicians, and the operation of an unsanctioned medical care delivery system--motivated legislators to restrict entry of foreign-trained physicians by creating more stringent performance requirements.

The Educational Council for Foreign Medical Graduates, established by a group of private professional organizations in 1956, was responsible for the certification of the qualifications of the foreign medical graduates--FMGs. Certification required the physician to pass a Council examination, including

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[8/] Butter, I. and Schaffner, R. "Foreign Medical Graduates and Equal Access to Medical Care," Medical Care, 9:136, 1971.

[9/] For more detail see Weiss, R. et al., "Foreign Medical Graduates and the Medical Underground," New England Journal of Medicine, 290:1408-13, 1974.

an English competency requirement, and to have satisfactory credentials from his or her school of graduation. Such certification was a mandatory prerequisite for entry into a graduate training program approved by the American Medical Association and was viewed as an adequate competency assessment procedure. However, the program was often circumvented because some hospitals (1) placed FMGs in nonapproved training programs, (2) created special fellowship training programs to prolong the FMGs stay in the U.S., (3) emphasized service delivery rendered by the trainee over his or her training, (4) did not provide adequate orientation and training opportunities, and (5) offered contracts to FMGs who had already signed contracts elsewhere.[10/]

The State Department asked the Commission on Foreign Medical Graduates (which later merged with the Educational Council and became known as the Educational Commission for Foreign Medical Graduates--ECFMG) to address these problems. The Commission was responsible for the management, supervision, and documentation of FMGs coming to the U.S. to serve in any direct patient care activities.

Other governmental and nongovernmental organizations began policy analyses aimed at strengthening FMG performance requirements. These organizations included the Coordinating Council on Medical Education, the National Security Council's Subcommittee on International Exchanges, and the Department of

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[10/] Chapman, C.A. Statement before the Subcommittee on Immigration, Citizenship, and International Law, Ninety-Fifth Congress, March 24, 1977, pg. 4-5

Health, Education, and Welfare (which later became the Department of Health and Human Services). Although the recommendations for action differed, the concern that the qualfications of U.S.- and foreign-trained physicians be made comparable was common to all reports resulting from the analyses.

Specifically, the organizations called for a de-emphasis of the preferential treatment of FMGs, improvement in the FMG qualifications screening process, and a revision of the exchange visitor program to remove it as a stepping stone and means of circumventing the regulations for permanent immigration.

The ECFMG responded to demands for more stringent credentials in 1975 by modifying the English competency requirement to include the Test of English as a Foreign Language (TOEFL), which raised the competency level for those requesting graduate medical education above that required for entrance into any other type of graduate training. The number of J-visas granted dropped from an average of 4,600 in 1973 and 1974 to 2,600 in 1975 and 1976, possibly as a result of this modification.

However, permanent immigrant visas increased from 4,500 in 1974 to 5,300 and 6,200, respectively, for 1975 and 1976, with adjusters remaining at about 1,500 for those two years. New entrant permanent immigrants (the remainder when adjusters are removed) rose from 2,900 in 1974 to 3,900 in 1975 and then to 4,400 in 1976. Much of this increase was generated by increases in the number of family preference visa permanent immigrants--from 900 in 1974 to more than 1,400 in 1976--and increases in nonpreference immigrants--from 1,250 in 1974 to 2,100 in 1976 (table II-3). Family preference visa aliens, not required to obtain ECFMG certification prior to entry, would not have been affected by the TOEFL. Nonpreference aliens, although required to be certified in English prior to the visa award, did not appear to have been affected by the TOEFL requirement to the extent that exchange visitors (J-visa) were, at least in terms of number of visas awarded. This may have been, however, because the total number of nonpreference aliens taking the TOEFL increased.

The decline in the number of J-visa physicians also may have been due to U.S. medical school graduate growth increasing at a faster rate than first-year graduate medical education slots had been expanding (table II-4), thereby reducing the number of remaining positions available to FMGs. (FMG participation has been declining since 1974. Although U.S. medical school graduates were and are not expected to substitute for FMGs on a one-for-one basis by specialty, the aggregate number of excess slots above those available to the U.S. graduate is declining). H-visas stabilized at about 550 over the 1975-76 period. In 1976, visas in general were still awarded predominantly to Asians.

The Health Professions Educational Assistance Act of 1976

Coincident with these changes in the mid 1970s came the Health Professions Educational Assistance Act of 1976 (P.L. 94-484), which further extended and modified the health professions assistance legislation contained in Title VII

Table II-3. Entry of Foreign Physicians into the United States by Type of Visa, 1974-1978

	1974	1975	July 1975 - June 1976 1976	July 1 - Sept. 30, 1976	Oct. 1976 - Sept. 1977 1977	Oct. 1, 1977 - Sept. 30, 1978 1978
Total Visas Awarded	9,976	8,770	9,288	2,146	9,106	5,566
Total New Entry Supply	8,344	7,316	7,514	1,805	6,681	3,467
Permanent Immigrants	4,532	5,361	6,184	1,305	7,073	4,435
New Entry	2,900	3,898	4,410	964	4,648	2,336
Occup. Pref.	1,688	1,902	1,909	357	2,093	1,071
Admissions	745	1,020	866	187	790	169
Adjustments	943	882	1,043	170	1,303	902
All Other	2,844	3,459	4,275	948	4,980	3,364
Family Pref.	1,586	1,805	2,168	545	2,513	2,765
Admissions[1]	900	1,224	1,437	374	1,391	1,568
Adjustments[1]	686	581	731	171	1,122	1,197
Non-Pref.	1,258	1,654	2,107	403	2,467	599
Admissions	1,258	1,654	2,107	403	2,467	599
Adjustments[2]	-	-	-	-	-	-
Temporary Immigrants	5,444	3,418	3,104	841	2,033	1,131
Exchange Visitors	4,717	2,849	2,563	674	1,578	951
H-Visas	727	569	542	167	455	180

[1] Estimated

[2] Assumes all non-occupational preference adjusters chose family preference visa status

Source: Annual Reports, selected years. Immigration and Naturalization Services. Also unpublished data, Immigration and Naturalization Service, and National Science Foundation, 1980.

Table II-4. Foreign Medical Graduates as a Percent of New Licentiates, as a Percent of Filled Residencies, and Numbers of New Entry Aliens by Visa Status, in Comparison with U.S. Graduates; Selected Years 1963-1979

YEAR	Active FMG Supply: Number	Active FMG Supply: Percent of Total Active M.D.s	Net Change in FMG Supply	FMG's as Percent of Total New Licentiates	FMG's as a Percent of Total Filled Residencies	New Entry Immigrants	Exchange Visitors	H-Visa	Total New Entries	U.S. Graduates
1963	30,925[2]	11.2[3]	NA	17.5	24	2,093[4]	4,637	NA	6,730	7,264
1966	NA	NA	NA	18.5	30	2,075	4,370	183	6,238	7,574
1967	45,816[2]	14.8[3]	NA	22.9	32	2,484	5,264	367	8,115	7,743
1968	NA	NA	NA	22.4	32	2,408	5,701	296	8,403	7,973
1969	53,552	16.5[3]	NA	23.1	33	2,180	4,460	299	6,939	8,059
1970	54,404	17.5	NA	27.3	33	2,265	5,008	357	7,630	8,367
1971	59,499	18.5	5,095	35.2	32	2,846	4,784	249	7,879	8,974
1972	64,701	19.5	5,202	46.0	32	2,754	3,932	338	7,024	9,551
1973	67,141	19.9	2,440	44.4	30	2,979	4,614	530	8,123	10,391
1974	70,940	20.3	3,799	40.0	29	2,908	4,717	727	8,352	11,588
1975	76,205	20.9	5,265	35.0	26	3,898	2,849	569	7,316	12,714
1976	79,722	21.2	3,517	36.0	23.6	4,410	2,563	542	7,514	13,561
TQ[1]	NA	NA	NA	NA	NA	964	674	167	1,805	NA
1977	78,800	20.7	(922)	32.2	18.2	4,648	1,578	455	6,681	13,607
1978	83,976	21.0	5,176	23.6	16.5	2,336	951	180	3,467	14,393
1979	89,465	21.5	5,489	17.9	14.2	NA	NA	NA	NA	14,966

[1] Transition quarter.
[2] Total, active not available.
[3] Percent of total, active not available.
[4] Adjusters of status estimate not available.

Source: Licensure data for 1966-1972 are derived from Licensure Statistics for 1973, Council on Medical Education, AMA, 1974. Licensure data for 1973-1979 are found in Physician Distribution and Medical Licensure in the U.S., AMA, select years.

Immigration data are obtained from Rosemary Stevens, "Physician Migration Reexamined," Science, 1975 and unpublished tables National Science Foundation (1976-1978).

Yearly graduates of U.S. medical schools for 1975 were obtained from "Medical Education in the U.S," JAMA, select years.

Residency data to 1974 from Directories of Approved Residencies, select years.

Residency data 1975-1979 from The Role of Foreign Medical Graduates in Graduate Medical Education Programs, 1975-1979, AMA, Chicago, 1980.

1970 through 1979 AMA professionally active FMG supply is adjusted to account for the percentage of active "not classified."

of the Public Health Service Act. P.L. 94-484 declared that "the availability of high quality health care to all Americans is a national goal," and that "there is no longer an insufficient number of physicians and surgeons in the U.S. so that there is no further need for affording preference to alien physicians and surgeons in admission to the U.S. under the Immigration and Nationality Act." The 1976 Act focused on reducing the number of FMGs and a concomitant increase in the level of competence of those granted admittance.

For the first time, legislation incorporated standards in the immigration regulations for alien physicians to meet in order to enter the U.S. to practice medicine.

Primarily, the Health Professions Educational Assistance Act of 1976 reflected the concerns related to the FMG impact on U.S. health care--the quality of care delivered by the FMGs and the wisdom of the U.S.'s current and projected reliance upon FMG services. The role the U.S. was playing in a "brain drain" of developing nations was considered only secondarily.

For the exchange visitor (J-visa), the Act established four requirements for obtaining graduate medical education or training:

1. An accredited school of medicine must agree in writing to provide the training or to assume the responsibility for arranging for the training;

2. The alien has passed Parts I and II of the National Board of Medical Examiners Examination (NBME), or the equivalent; is competent in written

and spoken English; is be able to adapt to the educational and cultural environment; and has adequate prior training;

3. The alien is committed to return home, and the home country has provided written assurance that the alien, upon returning home, will be appointed to a position in which his or her acquired skills will be fully utilized; and

4. The duration of training is limited to two years except that duration can be extended for one additional year if written assurance is provided by the alien's home country, satisfactory to the Secretary of Health and Human Services, that the additional training is needed to qualify that alien for that position to which he or she will be appointed upon return home.

Since the Congress had anticipated the impact (of cutting back in new entrant exchange visitors) on hospitals sponsoring GME, it mandated, in effect, a gradual withdrawal of hospital reliance upon J-visa aliens by stipulating a waiver clause to be operational through 1980. Requirements 1 and 2 above would be waived for an alien if a "substantial disruption" in the health services provided by a GME program would result if an alien who did not pass the equivalent exam were denied entry to that program. However, in granting waivers, the Attorney General could not allow the total number of J-visa aliens participating in GME nationally to exceed the number participating on January 10, 1977, about 5,100. Furthermore, an alien who came to the U.S. on a temporary status primarily for GME was prohibited from applying for permanent residence status until he or she had first been physically present in his or her country of nationality or last residence for at least two years. The Congress made no provision for disruption caused by cutbacks in permanent immigrants, who represented the remaining 13,000 FMGs in GME at that time.

Further restrictions were placed on the entrance of aliens wishing permanent immigrant status either under the occupational preference categories (third and sixth) or as nonpreference immigrants. Only aliens requesting family preference status were exempt. Beginning January 10, 1977, occupational and nonpreference aliens were required to pass Parts I and II of the NBME examination (or an equivalent) and be competent in written and oral English. The permanent immigrant alien immigrating under these categories had to continue receiving labor certification. However, since the Congress declared that physicians were no longer in short supply, the Department of Labor removed physicians and surgeons from Schedule A under which the Department had been giving blanket certification.

Public Law 94-484 also placed restrictions on the temporary workers or H-visa aliens. The H categories were restricted to H-1 only--those temporary workers of distinguished merit and ability--thereby eliminating entry of physicians as temporary workers in short supply and as trainees. The H-1 category was further restricted to those distinguished aliens who were coming at the invitation of an institution for the purpose of teaching and/or of participating in research and who were not to be involved in direct patient care.

All provisions of P.L. 94-484 were to be effective as of January 10, 1977. Any physician who was, on January 9, 1977, (1) a doctor of medicine, fully and permanently licensed to practice medicine in a State, (2) held a specialty certificate on that date, and (3) was practicing medicine in a State on that date, was exempt from the legislated provisions.

Although effective as of January 10, 1977, the impact of P.L. 94-484 on the FMG entry in 1977 was diverse. The number of new entrant J-visa aliens, despite the waiver provisions of the law, dropped to about 1,600 in 1977 from the 2,600 figure the year before. Despite this drop, however, total permanent immigrant visas rose to over 7,000 in 1977, an increase of almost 1,000 over the previous year, due to a 40 percent increase in adjusters of status from the previous year and a stabilizing of new entrants. This stabilization occurred even though the new entrants were restricted to immigrating in the last three months in 1976 and the first nine days in January (table II-3).

During 1977, amendments were made to the Act to remedy any serious problems that had either arisen or were forseen in the implementation of the 1976 law. The first alteration addressed an alleged "catch-22" clause. P.L. 94-484 required a prospective alien to receive a permanent (except family preference) visa or J-visa, to have passed an examination equivalent to those parts I and II of the NBME which are administered soley within the borders of the U.S. Since the Visa Qualifying Exam (VQE)--designated as an NBME parts I and II equivalent--would not be administered until September 1977 and the results would not be available until late 1977 or early 1978, it was impossible for an alien to qualify for entry into the U.S. after January 10, 1977. The only exception was the individually "waived" J-visa alien.

To deal with this provision, Congress extended the effective date for J-visa restrictions to January 10, 1978--in effect, providing a blanket waiver for the 1977 J-visa aliens. (The effective date of the exemption provisions, previously cited, was also extended to January 10, 1978). Occupational and non-preference alien immigration for the 1977 fiscal year, however, was confined to the last three months of 1976 and the first nine days of January 1977. In addition, the 1977 amendments altered the H-1 visa category to include those aliens engaged in patient care incidental to teaching and research and not only those "solely" engaged in research and/or teaching.

A requirement for taking the VQE in September 1977, as stated by the ECFMG, was the alien's having passed the TOEFL within the previous two years. Additionally, ECFMG certification based on the VQE examination required a candidate to have a complete set of documented medical education credentials, which were to be part of the VQE application. Both of these requirements would have potentially precluded a significant number of aliens from sitting for the 1977 VQE; the documentation requirement because the alien would not have had the time to gather the necessary materials, and the TOEFL requirement because it is given in January and July as part of the ECFMG exam with the results of the July exam not available prior to the September VQE. To remedy this, a special ECFMG exam was scheduled for May 1977.

The amendments extended the blanket waiver of two P.L. 94-484 requirements for J-visa aliens until January 10, 1978. Following the expiration of the blanket waiver, J-visa waiver applications were to be reviewed on a case-by-case basis until December 31, 1980. The P.L. 94-484 requested the International Communication Agency, on advice from the then Department of Health, Education, and Welfare, to develop criteria for waiver and submit such to the ECFMG, the agency to which waiver applications were to be addressed.

In the case of a negative decision, an appeal might be made to the Substantial Disruption Waiver Appeal Board, which is chaired by the Administrator, Health Resources and Services Administration, Department of Health and Human Services. Waivers issued under the appeal procedure are referred to as tier II waivers, as opposed to tier I waivers issued by ECFMG. There are four categories of tier I waiver eligibility in addition to the requirement that the sponsoring institution reduce its reliance upon FMGs by 10 to 20 percent a year.

The fiscal year 1978 marked the first nearly full year of P.L. 94-484 effectiveness and the first year of overall numerical impact. Total permanent immigrants dropped from about 7,000 to 4,400. New entrant permanent aliens nearly halved with occupational preference aliens dropping from approximately 800 to 170 and nonpreference aliens from about 2,500 to 600. J-visa new entrants declined from about 1,600 to 950 while H-visa aliens went from 450 to 180. The only increase was observed in new entrant family preference visa aliens, exempt from the P.L. 94-484 restrictions, coupled with a reduction in adjusters of status from about 2,400 to only 2,100 (table II-3). The mix of the country of medical education of these aliens changed markedly for the first time since 1970. Asians accounted for 53 percent of the immigrant visas compared to the 60 and 70 percent figures throughout the decade. The most significant change has been in favor of the Americas. This change over 1977, however, is only in percentage terms, not in actual volume (table II-2).

Although the legislation did provide for a case-by-case waiver of restrictions for J-visa aliens, only 35 applications were received for tier I waivers and none for tier II waivers in 1978; 140 tier I waivers were granted in 1979. Permanent immigrant new entrants in 1978 were unable to take up any slack in GME caused by J-visa alien declines primarily because their volume declined also. However, U.S. citizens trained either partially or fully in schools abroad were entering GME in increasing numbers. Those U.S. citizens who were partially trained abroad and who entered U.S. medical schools with advanced standing [11] reached an unprecedented level of 858 in academic year 1978-79, more than double the previous year's number. Additionally, in 1978-79, U.S. medical schools enrolled 515 students of whom 461 successfully completed the fifth pathway program.[12]

P.L. 94-484's effectiveness in curtailing FMG entry is demonstrated by the residency program figures. FMGs in residency programs dropped 23 percent in 1977 from the 1976 figure and an additional 10 percent by 1978. By 1979, FMGs in GME began to stabilize at about 9,500. As of mid-1980, only 2,000 J-visa aliens remained in GME, down from the 5,000 figure as of January, 1977 (table II-5).[13/] However, several interesting situations now appear to forecast the possible future participation of FMGs in the U.S. health care delivery system. First, FMGs are passing the VQE at a greater percentage than observed in 1977, indicating possible future increases in the number of aliens receiving occupational and nonpreference visas. Second, the new entrant family preference visa aliens have steadily increased during the prelegislative and legislative periods to nearly 1,600 in 1978. Third, adjusters of status have also increased over these same periods. Finally, J-visas as a percent of all new entrant FMGs dropped from about 50 percent in 1975 to less than 20 percent in 1979.

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[11] U.S. schools of medicine have special programs to facilitate the assimilation of U.S. citizens with basic science education obtained abroad and passage of NBME Part I into undergraduate U.S. medical education. They ultimately become USMGs.

[12] This program provides training and ultimate certification to U.S. citizens who have completed their undergraduate training abroad but have not committed themselves to "social" service in that country of training.

Therefore, it is anticipated that future permanent immigrant alien participation coupled with the participation in GME of USFMGs and U.S. citizen tranferees will serve to increase the non-fully U.S.-trained participation in GME to levels surpassing the volume observed in the mid-1970s. Also, the P.L. 94-484 restrictions for J-visa alien length of stay in GME to 2, perhaps 3, years had produced hardships upon certain residency programs. In essence, although J-visa aliens were precluded from participating in residency programs exceeding 3 years in length, hospitals had relied upon FMGs in certain specialties for which training had exceeded 3 years.

[13/] Goodman, L. et al. "Foreign Medical Graduates and Graduate Medical Education: A Before/After Study of P.L. 94-484, 1975-1979." American Medical Association, Chicago, September, 1980.

Table II-5. MEDICAL RESIDENTS BY COUNTRY OF GRADUATION/VISA STATUS

1975-1979

Year Ending December 31

Country/Visa	1975	1976	1977	1978	1979	Percent Change 75-79	Percent Average Annual
Total	57,802	63,046	62,505	60,610	65,910	14.0	3.3
USMGs	41,027	46,043	49,119	48,460	53,980	31.6	7.1
CMGs	315	369	240	209	281	-10.8	-2.8
Non-US/CMGs	16,460	16,634	13,146	11,941	11,649	-29.2	-7.9
USFMGs	1,466	1,783	1,752	1,969	2,277	55.3	11.6
FMGs	14,994	14,851	11,394	9,972	9,372	-37.5	-11.1
EVFMGs	7,364	6,433	4,355	2,695	1,739	-76.4	-30.3
Percent Non-US/CMGs	28.5	26.4	21.0	19.7	17.7	--	--
Percent FMGs	25.9	23.6	18.2	16.5	14.2	--	--
Percent EVFMGs	49.1	43.3	38.2	27.0	18.6	--	--

Source: Goodman, L. et al. "Foreign Medical Graduates and Graduate Medical Education: A Before/After Study of P.L. 94-484, 1975-1979." American Medical Association, Chicago, September, 1980.

Although FMG participation in GME dropped from 26 percent in 1975 to 14 percent in 1979, the American-citizen component of the FMGs--USFMGs--increased substantially. USFMGs in GME (who do not include fifth pathway and transferees to U.S. schools) rose from 1,466 in 1975 to 2,277 in 1979. Including USFMGs with the other FMG components, the overall non-U.S. trained segment in GME declined from 28.5 percent in 1975 to about 18 percent in 1979. Moreover, the bulk of the FMG loss each year has come from the dramatic decline in J-visa alien participation in GME, the major part of it in the single year 1976 to 1977. Thus, despite the continued decline in J-visa participants and the legislative restrictions in force, overall FMG participation including USFMGs have leveled at about 11,600 as of 1979 (Table II-5).[14]

Future changes in the visa and citizenship mix of new entrants into GME may very well nullify the curtailment effects of P.L. 94-484 in the early 1980s with subsequent increases likely by 1990. The detailed projections are discussed in greater detail in Chapter VI.

Recent Legislation

The most recent FMG legislation (P.L. 97-116) was enacted late in 1981 in response to a growing concern over the substantial disruption of services. The new law has two foci. First, because the 1976 law and its amendments limited the length of stay in the U.S. of a J-visa to 2 and at most 3 years, completion of training in specialty residency programs exceeding 3 years was precluded. Second, many inner-city hospitals in the East have relied and continue to rely heavily upon FMGs despite attempts to cut back as required by law.

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[14] Ibid.

The legislation addressed these two concerns by mandating three changes:

1. Extension of the "substantial disruption" waiver program to December 31, 1983.

2. Increasing the length of stay for J-visa aliens to a period normally prescribed for the given training program not to exceed 7 years, whichever is less. An alien can change programs just once, but not later than 2 years after acquiring the exchange visitor status.

3. Repealing the requirement that an FMG in practice in the U.S on January 9, 1977 must have medical specialty board certification to be considered as having passed the NBME Parts I and II.

Also of note are the regulatory changes in the process of labor certification of foreign physicians. Although "physicians" were removed from Schedule A, which once permitted blanket certification of FMGs, certification would nevertheless be granted to alien physicians locating in Health Manpower Shortage Areas (HMSAs) for primary care or in other areas identified as having insufficient supply in their specialty. The Bureau of Health Professions' Office of Data Analysis and Management is the DHHS organization responsible for such designations.

Discussion

Although the above legislation was designed to temper the slope of required decreased dependency upon FMGs in GME, the focus still remained on the relatively few J-visa aliens in GME rather than on the prospective permanent immigrant alien who represents the bulk of FMG participation in GME. While it is true that family preference visa aliens are exempt from the P.L. 94-484 requirements, occupational preference and non-preference alien physicians are not, and no waiver exists. These latter two groups, prior to the impact of P.L. 94-484, have represented the bulk of yearly new entrant FMGs, and thus the majority of FMGs entering GME. To ease the decreased dependency, an additional provision likely would have to be added to the legislation which addresses the gradual--not abrupt--phaseout of new entrant occupational and nonpreference visa aliens.

Subsequent to the enactment of the law, the number of new entrant occupational and non-preference visa aliens sharply declined. The number of family preference visa aliens, rising from prior levels, thus represented the vast majority of new entrants. To further restrict immigration, another provision likely would have to be added in order to truly limit FMG entry into the U.S. health care system as family preference visa aliens are exempt from existing restrictions, particularly the newly revised credentialling requirements. However, if the new Foreign Medical Graduate Examination in the Medical Sciences is in place as expected by July, 1984, all FMGs desiring ECFMG certification will be required to take and pass it.

Finally, data for academic year 1981-82 revealed that new entrant exchange visitors numbers 2,500, with only 544 or 20 percent entering GME.[15] This latter figure reflects the rapid decline in exchange visitor physicians entering GME since 1973-74 when these new entrants numbered 2,917 and represented nearly two-thirds of all new entrant exchange visitors. However, all exchange visitor new entrants numbered only 951 in academic year 1977-78 and 420 in the first three quarters of 1978-79, also much smaller numbers than in previous years and consistent with the rapid decline in all new entrant exchange visitors. Whether this group of nearly 2,000 new entrant exchange visitor physicians not entering GME in 1981 represented a new and perhaps continuing phenomenon can not be determined without additional data. Nevertheless, without GME, these new entrants can only represent additions to physician supply not in direct patient care.

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[15] Unpublished data tabulated by the Division of Medicine, BHPr, HRSA, November, 1982.

Chapter III

Recent Literature Review

The growing supply of domestically trained practitioners, concerns about possible effects of a potential physician oversupply, and concerns about the quality of the care provided by FMGs were instrumental in the development of P.L. 94-484 in an attempt to curtail the increase of future FMG participation in American medicine. However, studies and data published concurrently with the legislation (before its impact could be measured) suggested that the law might have a negative impact on the accessibility and availibility of care for certain needy subpopulations[1/], and that it was actually based upon inadequate information about the effects of FMGs on the U.S. health delivery system.[2/]

This research and data not only confirmed earlier findings that eastern city hospitals rely heavily on FMGs in the specialties of anesthesiology, pathology, and psychiatry,[3/] but also revealed that FMGs are found in greater relative

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[1/] Lowin, A. FMGs? An Evaluation of Policy-Related Research. Interstudy for the National Science Foundation, Minneapolis, May, 1975.

[2/] Butter, I., Wright, G., and Tasca, D. "FMGs in Michigan: A Case of Dependence," Inquiry, XV:45-57, March, 1978.

[3/] Way, P.O. "Foreign Medical Graduates in U.S. Graduate Medical Education Programs, 1977," Socio Economic Issues of Health, 1978, American Medical Association, Chicago, 1978.

proportions in rural areas,[4] in primary care office-based practice in metropolitan areas,[5] and are more evenly distributed relative to the population they are serving[6] than their U.S.-trained counterparts. Additionally, it was shown that female representation was not only greater among FMGs than among USMGs but that these female FMGs locate in greater relative numbers in rural areas than their male FMG or female USMG counterparts.[7] Finally, it was also shown that FMGs were not necessarily providing inferior care,[8] and that the quality of their hospital-based care was more a function of the quality of the care provided by the hospital and the supervision provided to the FMG.[9]

The research of the early 1970s indicated that FMGs were locating their practices in the same fashion as USMGs, and that they actually exacerbated the geographic maldistribution.[10] Moreover, the examination performance of FMGs (from developing nations) was noticeably inferior to their U.S. trained counterparts, implying that the quality of all FMG care was also inferior. Although this information was one of the major bases for the P.L. 94-484 restrictions, it also stimulated more rigorous research to test these findings. Findings from these research efforts in the latter years of the 1970s began to cast doubt upon some of the assumptions that had stimulated the legislation. For example, Saywell and Studnicki[11] evaluated the quality of care (as measured by two types of medical audits) of USMGs and FMGs in similar hospital settings and with similar patient load characteristics. They concluded that no discernible consistent pattern of differences in performance between USMGs and FMGs existed, and that the largest and most consistent difference in physician performance was associated with the hospital, not the physician characteristics. These results corroborated earlier studies that the supervision and direction received by a resident was a strong influence on the quality of care delivery, and that residents in university-affiliated hospitals, the predominant locational preference of USMGs, were more closely supervised.[12]

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[4] Swearingen, C.M., and Perrin, J.M. "Foreign Medical Graduates in Rural Primary Care: The Case of Western New York State," Medical Care, 15:331, 1977.

[5] Physician Distribution and Medical Licensure in the U.S., 1977. American Medical Association, Chicago, 1978.

[6] Politzer, R.M., Morrow, J.S., and Sudia, R.K. "Foreign-Trained Physicians in American Medicine: A Case Study," Medical Care, 16:611, 1978.

[7] D'Elia, G, and Johnson, I. "Women Physicians in a Non-Metropolitan Area" Journal of Medical Education, 55:580-88, July, 1980.

[8] Goldblatt, A., Goodman, L.W., Mick, S.S., and Stevens, R. "Licensure, Competence, and Manpower Distribution," New England Journal of Medicine, 292:3, January 16, 1975.

[9] Saywell, R.M., and Studnicki, J. The USMG-FMG Quality of Care Study. Final Report Contract No. 106-74-164, U.S. DHEW, December, 1976.

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[10] Butter, I., and Schaffner, R., "Foreign Medical Graduates and Equal Access to medical Care," Medical Care. 9:136, 1971.

[11] Op.Cit. Saywell.

[12] Margulies, H., Bloch, L., Cholka, F. "Random Survey of U.S. Hospitals with Approved Internships and Residencies: A Study of the Professonal Qualities of Foreign Medical Graduates," Journal of Medical Education, 43:706-16, 1968.

Studies also surfaced that challenged the notion that FMGs exacerbated the geographic maldistribution of physicians. Studnicki, et al.[13/] reported that FMGs tended to serve a disproportionately greater share of disadvantaged patients in areas where physicians were plentiful and tended to comprise a disproportionately high percentage of total physicians accepting Medicaid. Swearingen and Perrin [14/] examined a rural population in western New York State and found that FMGs were disproportionately responsible for the delivery of primary care. Still other data indicated that in certain areas FMGs were disproportionately found in primary care office-based practice.[15/] These results not only challenged the FMG distribution assumptions but also contradicted the often stated conclusion that FMGs are predominantly found in the specialties of anesthesiology and pathology. It is likely, however, the studies of FMGs that indicated they locate practices where USMGs locate found these alien physicians in the early stages of their careers, training in inner city hospitals. With the passage of time, the more recent studies are observing those FMGs completing their training and making practice location decisions. It is at this career juncture that FMGs are observed entering primary care office-based practice in greater relative proportions than USMGs.

[13/] Studnicki, J., Saywell, R.M., and Wiecketek, W., "Foreign Medical Graduates and Maryland Medicaid," New England Journal of Medicine, 294:1153, 1976.

[14/] Op.Cit., Swearingen.

[15/] Op.Cit., "...Distribution...," America Medical Association.

Moreover, a very recent study indicated that female FMGs located in greater relative numbers in rural areas than the physician subgroups of female U.S. trained or male foreign trained physicians.[16/] Politzer et al., [17/] in a study of the Baltimore SMSA revealed that FMG geographic location patterns were more highly correlated with population patterns than those of USMGs, whether office or hospital-based. Most significantly, in hospital-based practice, FMGs were found in the specialties in university-affiliated hospitals that were largely avoided by USMGs and were the predominant source of care in nonuniversity-affiliated hospitals regardless of specialty.

As indicated earlier, however, the mix of donor nations has changed in recent years. In addition, USFMGs are increasing in number. These changes thus pose questions regarding the future participation of FMGs in American medicine: Will the more severe requirements for medical credentialing of FMGs entering the U.S. under the restrictions of P.L. 94-484 coupled with increases in USMGs and USFMGs impact the location and specialty patterns of FMGs? Will FMGs continue to fill gaps and serve population subgroups historically less favored by USMGs?

The impact of P.L. 94-484 has only been partially analyzed. One major difficulty is the lack of detailed data on physician immigration beyond 1978. Recent data on EVFMG participation in GME from other sources, indicate that the significant reduction in exchange visitors has continued. But has this

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[16/] Op.Cit., D'Elia.

[17/] Op.Cit., Politzer.

reduction had an impact on hospitals and on the patients served by these hospitals? It is puzzling that relatively few hospitals have applied for waivers from the restrictions under the substantial disruption provision of P.L. 94-484. One possible explanation is that these hospitals made more effective use of substitutions for exchange visitor physicians, such as permanent immigrant physicians, or other professionals, including nurse practitioners and physicians assistants. Unfortunately, there is little evidence to either support or refute this reasoning.

The impact of the increasing supply of USMGs on FMGs is also not clear at this time. Competition among physicians has increased in several areas of practice. One such area is the location and specialty of residency training. Nationally, the number of residencies has been significantly greater than the number of students seeking positions, yielding a substantial number of unfilled positions. But in recent years, the number of residencies has increased at a slower rate than the number of U.S. trained graduates. Thus, there is likely to be increasing competition among students with a significant impact on the availability of positions for FMGs (both aliens and U.S. citizens).

There is also likely to be increasing competition among physicians for practice locations. Recent evidence reveals that the increase in the physician supply has been widespread.[18/] However, the practice location

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[18/] Diffusion and The Changing Geographic Distribution of Primary Care Physicians. U.S. DHHS Publication (ODAM) Report No. 4-83, June, 1983.

decision is a complex one, reflecting the preferences of physicians and the patient population they serve. Alien FMGs have exhibited distinctly different location patterns from USMGs. It is not clear whether or not USMGs will decide to locate in areas traditionally served by FMGs, such as inner city areas with relatively poor patients. In some instances, the increases in USMG supply may not be sufficient to meet FMG replacement needs.[19] The impact of the growing USFMG component is also unknown since they exhibit specialty and location choices that are different from USMGs and other FMGs. Further research is needed in these areas.

The following analysis of the most recent data and the resultant projections will try to shed some light upon the future role of FMGs in American medicine.

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[19] Goodman, L.J., and Wunderman, L.E. "Foreign Medical Graduates and Graduate Medical Education." Journal of the American Medical Association, 246:854-8, 1981.

Chapter IV

Analysis of the Numerical Impact of FMGs on Physician Supply

Introduction

This section examines both the magnitude and direction of the impact of FMGs on physician supply. It includes analysis of the specialty, activity, location, training and performance impacts of FMGs.

According to statistics of the American Medical Association, total physician supply increased by 36 percent between 1970 and 1979 (table IV-1). However, the number of "professionally active" physicians (as defined by the AMA) grew by only 26.7 percent over that same nine-year period. This difference in growth patterns does not necessarily reflect changes in the inactivity or retirement behavior of physicians which has changed little over the decade.

Table IV-1. Trends in the Distribution of MDs in the United States and Possessions by Specialty for Select Years 1970-1979, and Changes in Supply 1970-1979, 1970-1973, 1973-1976, and 1976-1979

Specialty	Year						Changes in Supply							
	1970	1973	1976	1977	1978	1979	1970-79		1970-1973		1973-1976		1976-1979	
							Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total MDs 1/	334,028	366,379	409,446	421,278	437,486	454,564	120,536	36.1	32,351	9.7	43,067	11.8	45,118	11.0
Estimated DHPA Active	311,179	337,009	376,120	380,179	399,123	415,229	104,050	33.4	25,830	8.3	39,111	11.6	39,109	10.4
Prof. Active	310,845	324,367	348,443	363,619	375,811	393,729	82,884	26.7	13,552	4.4	24,076	7.4	45,286	13.0
Primary Care: Total	117,761	123,776	135,881	140,948	143,383	153,417	35,656	30.3	6,015	5.1	12,105	9.8	17,536	12.9
General Practice 2/	57,948	53,946	55,479	55,159	56,197	58,130	182	0.3	(-4,002)	(-6.9)	1,533	2.8	2,651	4.8
Internal Medicine	41,872	49,899	57,911	61,830	62,641	68,591	26,719	63.8	8,027	19.2	8,012	16.1	10,680	18.4
Pediatrics	17,941	19,931	22,491	23,959	24,545	26,696	8,755	48.8	1,990	11.1	2,560	12.8	4,205	18.7
Surgery 3/	67,166	71,055	76,373	77,777	78,451	82,400	15,234	22.7	3,889	5.8	5,318	7.5	6,027	7.9
OB/GYN	18,876	20,494	22,294	23,376	23,963	25,215	6,339	33.6	1,618	8.6	1,800	8.8	2,921	13.1
Radiology 4/	13,360	15,345	16,769	17,727	18,407	19,760	6,400	47.9	1,985	14.9	1,424	9.3	2,991	17.8
Psychiatry 5/	23,236	25,063	27,076	27,796	28,522	30,023	6,787	29.2	1,827	7.9	2,013	8.0	2,947	10.9
Anesthesiology	10,860	12,196	13,182	13,918	14,246	15,367	4,507	41.5	1,336	12.3	986	8.1	2,185	16.6
Other Specialty	59,586	56,438	56,868	62,077	68,839	67,547	7,961	13.4	(-3,148)	(-5.3)	430	0.8	10,679	18.8
Other 6/	23,163	42,012	61,003	57,659	61,675	60,835	37,652	162.4	26,299	113.4	18,991	45.2	(-168)	(-0.3)

1/ Each year's total includes MDs who are inactive, not classified and address unknown.
2/ Includes Family Practice.
3/ Surgery includes all AMA defined surgical specialties except Obstetrics/Gynecology.
4/ Radiology includes Diagnostic and Therapeutic Radiology.
5/ Psychiatry includes Child Psychiatry.
6/ Includes not classified, address unknown and inactive MDs.

Source: Physician Distribution and Medical Licensure in the U.S., 1979. American Medical Association, Chicago, 1980.

Rather, this difference is attributable largely to a data collection problem.[1]

The Office of Data Analysis and Management, formerly the Division of Health Professions Analysis, developed estimates which reclassified as active a proportion of the MDs the AMA reported as "not classified" (hereafter called "Estimated DHPA Active"). These estimates reveal that between 1970 and 1979 DHPA active physician supply grew by more than 33 percent nearly paralleling total growth (table IV-1). Although this reclassification has significant numerical impact on the change in aggregate physician supply figures, insufficient information exists to reclassify these physicians on a yearly basis by type of activity or specialty. Hence, the following analyses should be reviewed only as reflective of changes in specialty and activity patterns of "professionally active" physicians.

Impact on Specialty Distribution

Despite the rapid growth in family practice residencies, physicians in general practice (including family practice) continued to decline as a percent of all

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[1] The AMA professionally active figures for any given year do not necessarily represent the actual "numbers" of active, practicing physicians in that year. The AMA is not always able to identify or verify the practice characteristics of all MDs in every year and must include a "not classified" category in their reports. This category is largely made up of residents, relatively youthful, who are likely to be active. The number of physicians "not classified" rose from about 400 in 1970, or only one-tenth of one percent of the total, to about 24,000 in 1979, or about 5 percent of the total supply (table IV-2). This problem is especially significant for analysis of FMGs since they make up about 40 percent of all "not classified" MDs. "Not classified" FMGs were about 10 percent of all FMGs in 1979 and were as high as 14 percent in 1976 (table IV-2).

Table IV-2. Percent Distribution of MDs by Professional Activity and Primary Medical Specialty; United States and Possessions, 1970-1979

Professional Activity and Medical Specialty	Percent Distribution									
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
All M.D.s	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professionally Active	93.1	92.4	90.0	88.5	87.0	86.4	85.1	86.3	85.9	86.6
General Practice[1/]	17.3	16.3	15.5	14.7	14.2	13.9	13.5	13.1	12.8	12.8
Medical Specialties	23.1	23.8	23.6	23.7	23.7	24.1	24.3	25.1	25.1	26.1
Surgical Specialties	25.8	26.0	25.5	25.0	24.6	24.4	24.1	24.0	23.4	23.7
All Other Specialties	26.8	26.3	25.3	25.1	24.5	24.0	23.2	24.1	24.6	24.0
Not Classified	0.1	1.0	3.5	3.8	5.4	6.6	7.4	4.4	5.8	5.2
Inactive	5.9	5.6	5.6	6.2	5.7	5.4	5.4	6.7	6.1	6.2
Address Unknown	1.0	0.9	0.9	1.5	2.0	1.5	2.1	2.6	2.1	2.0
Foreign Medical Graduates (Excluding Canadians)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professionally Active	94.6	93.1	87.9	87.6	83.4	82.5	80.0	83.7	82.6	83.2
General Practice[1/]	11.8	11.0	10.4	10.2	N.A.	9.6	9.7	9.8	9.3	9.4
Medical Specialties	22.7	24.7	23.6	23.4	N.A.	23.3	22.8	23.6	20.7	25.1
Surgical Specialties	21.8	22.6	21.3	20.9	N.A.	20.0	19.4	20.0	18.4	19.6
All Other Specialties	38.3	34.9	32.6	33.1	N.A.	29.6	28.2	30.3	26.8	29.1
Not Classified	0.5	2.6	7.7	6.9	10.0	12.5	14.1	7.8	10.2	10.1
Inactive	3.2	3.0	2.9	3.0	2.7	2.6	2.7	3.2	2.9	2.8
Address Unknown	1.7	1.3	1.6	2.5	3.8	2.4	3.3	5.3	4.3	3.9

[1/] Includes Family Practice.

Sources: Physician Distribution and Medical Licensure in the U.S., Annual Editions, 1972-1979. Chicago, American Medical Association, Profile of Medical Practice, Annual Editions, 1971-1980, Chicago, American Medical Association.

physicians although their numbers were greater in 1979 than in 1970 for the first time in a decade. The number of general/family practitioners declined in the 1950s and 1960s, reached a low point in 1973, stabilized in the mid-1970s, and then progressively increased between 1977 and 1979. In these latter years, the additions of FPs more than compensated for the losses of general practitioners who died or retired in each of those years (table IV-1).

The changes in general/family practice reflected USMG, rather than FMG, practice choices. FMGs in this specialty increased by 35 percent between 1970 and 1979, slower than the 48.5 percent growth in the overall professionally active FMG supply (table IV-3).

Although FMG general/family practitioners represented a declining percentage of FMG supply, this decline was less than the commensurate percentage decreases in total supply of GP/FPs. Moreover, when total physician participation in this specialty began to steadily increase, FMGs represented a disproportionately high percentage of the growth, more than 30 percent between 1976 and 1979.

Other FMG specialties have not kept pace with total FMG growth. Surprisingly, this list includes some of the specialties that have traditionally been thought of as "FMG-preferred," such as psychiatry and surgery. FMG participation in internal medicine more than doubled, and in pediatrics, obstetrics-gynecology (ob/gyn), radiology and anesthesiology (the latter two are also FMG-preferred specialties) increased much faster than total FMG growth.

Table IV-3. Trends in the Distribution of Foreign Medical Graduate Physicians by Specialty, 1970, 1976-1979, and Change in Foreign Medical Graduate Physician Supply between 1970 and 1979

Specialty	YEAR						
	1970	1976	1977	1978	1979	Change 1970 - 1979 Number	Change 1970 - 1979 Percent
Total MDs 1/	57,217	85,623	86,789	91,351	96,605	39,388	68.8
Estimated DHPA Active	54,404	79,722	78,800	83,976	89,465	35,061	64.4
Professionally Active	54,142	68,510	72,686	75,422	80,394	26,252	48.5
Primary Care: Total	16,656	24,622	25,525	25,890	28,989	12,333	74.0
General Practice 2/	6,742	8,282	8,543	8,722	9,099	2,357	35.0
Internal Medicine	6,372	11,069	11,468	11,518	13,372	7,000	109.9
Pediatrics	3,542	5,271	5,514	5,650	6,518	2,976	84.0
Surgery 3/	9,407	12,277	12,668	12,795	13,633	4,226	44.9
Ob/Gyn	3,064	4,308	4,713	4,803	5,265	2,201	71.8
Radiology 4/	1,952	3,153	3,424	3,595	3,840	1,888	96.7
Psychiatry 5/	5,450	6,916	6,983	7,130	7,658	2,208	40.5
Anesthesiology	3,304	4,741	5,243	5,390	5,823	2,519	76.2
Other Specialty	14,309	12,493	14,130	15,819	15,186	877	6.1
Other 6/	3,075	17,113	14,103	15,929	16,211	13,136	427.2

1/ Each year's total includes MDs who are inactive, not classified, and address unknown.
2/ Includes Family Practice.
3/ Surgery includes all AMA defined surgical specialties except Obstetrics/Gynecology.
4/ Radiology includes Diagnostic and Therapeutic Radiology.
5/ Psychiatry includes Child Psychiatry.
6/ Includes not classified, address unknown and inactive MDs.

Profile of Medical Practice, 1980, American Medical Association, Chicago, 1980, table 10, p. 161.

Source: See Table IV-1.

Overall, FMG participation in the specialties over this nine year period was relatively similar, with the only exceptions being an increase in the proportion of FMGs in anesthesiology and small decreases in the "Other Specialty" category, internal medicine and surgery. In total numbers, FMGs represented about a third of the growth in total primary care physicians and specifically, a third of the growth in the specialties of pediatrics, ob/gyn, and psychiatry. Moreover, with "Other Specialties" as the only exception, the number of FMGs constituted a greater percentage of the growth in total physician supply (30 percent), and in individual specialty supply between 1970 and 1979 than it did for each year's supply in the aggregate (about 20 percent). That is, growth in some specialties occurred over the nine-year period in spite of declines in the USMG component of these specialties (table IV-4).

Impact on Practice Activity Distribution

Hospital-based practice was the practice activity of the majority of FMGs in 1970. More than 30 percent were in the training component of hospital-based practice and about 20 percent were full-time hospital staff while about 40 percent were in office-based practice. By as early as 1976, prior to P.L. 94-484, changes were beginning to occur. The training component of the FMG supply had dropped to about 25 percent while office-based practice became the activity of nearly half of all active FMGs. By 1979 the number of FMGs in office-based practice had doubled over the 1970 figure, while only about a third of the total number of FMGs worked in the hospital setting. Trainees had dropped to about 16 percent of the FMG supply, by 1979, only one-half of the representation in 1970 (table IV-5).

Table IV-4. Trends in the Distribution of Foreign Medical Graduate Physicians by Specialty, 1970, 1976-1979, and Change in Foreign Medical Graduate Physician Supply, Change in Total MD Supply, and Change in Foreign Medical Graduate Supply as a Percent of Total MD Change, 1970-1979

Specialty	Year					1970-1979 Change in Foreign Medical Graduate Supply		1970-1979 Change in MD Supply		1970-1979 Change in Foreign Medical Graduate Physician Supply as a Percent of MD Change
	1970	1976	1977	1978	1979	Number	Percent	Number	Percent	
Total MD's	57,217	85,623	86,789	91,351	96,605	39,388	68.8	120,536	36.1	32.7
Estimated DHPA Active	54,404	79,722	78,800	83,976	89,465	35,061	64.4	104,050	33.4	33.7
Professionally Active	54,142	68,510	72,686	75,422	80,394	26,252	48.5	82,882	26.7	31.7
Primary Care: Total	16,656	24,622	25,525	25,890	28,989	12,333	74.0	35,656	30.3	34.6
General Practice[1]	6,742	8,282	8,543	8,722	9,099	2,357	35.0	182	0.3	---
Internal Medicine	6,372	11,069	11,468	11,518	13,372	7,000	109.9	26,719	63.8	26.2
Pediatrics	3,542	5,271	5,514	5,650	6,518	2,976	84.0	8,755	48.8	34.0
Surgery[2]	9,407	12,277	12,668	12,795	13,633	4,226	44.9	15,234	22.7	27.7
Ob/Gyn	3,064	4,308	4,713	4,803	5,265	2,201	71.8	6,339	33.6	34.7
Radiology[3]	1,952	3,153	3,424	3,595	3,840	1,888	96.7	6,400	47.9	29.5
Psychiatry[4]	5,450	6,916	6,983	7,130	7,658	2,208	40.5	6,787	29.2	32.5
Anesthesiology	3,304	4,741	5,243	5,390	5,823	2,519	76.2	4,507	41.5	55.9
Other Specialty	14,309	14,493	14,130	15,819	15,186	877	6.1	7,961	13.4	11.0
Other [5]	3,075	17,113	14,103	15,929	16,211	13,136	427.2	37,652	162.4	34.9

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[1] Includes Family Practice.
[2] Surgery includes all AMA defined surgical specialties except Obstetrics/Gynecology.
[3] Radiology includes Diagnostic and Therapeutic Radiology.
[4] Psychiatry includes Child Psychiatry.
[5] Includes not classified, address unknown, and inactive MD's.

Source: See Table IV-1.

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Table IV-5. Trends in the Distribution of Foreign Medical Graduate MDs by Professional Activity for Select Years, 1970-1979, and Change in FMG Supply, 1970-1979

Specialty	Year										Total Change 1970 - 1979	
	1970		1976		1977		1978		1979			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total MD's [1]	57,217	-	85,623	-	86,789	-	91,351	-	96,605	-	39,388	68.8
Estimated DHPA Active	54,404	-	79,722	-	78,800	-	83,976	-	89,465	-	35,061	64.4
Professionally Active	54,142	100.0	68,510	100.0	72,686	100.0	75,422	100.0	80,394	100.0	26,252	48.5
Total Patient Care	48,191	89.0	62,796	91.7	66,738	91.8	68,768	91.2	72,742	90.5	24,551	50.9
Office-Based Practice	20,980	38.7	33,539	48.0	39,559	54.4	42,112	55.8	43,699	54.4	22,719	108.3
Hospital Based Practice												
Residents[a]	16,648	30.7	16,634	24.3	13,146	18.1	11,941	15.8	13,086	16.3	(-3,562)	(-21.4)
MD Staff	10,563	19.5	12,623	18.4	14,033	19.3	14,715	19.5	15,957	19.8	5,394	51.1
Medical Teaching	1,006	1.9	1,435	2.1	1,299	1.8	1,362	1.8	1,466	1.8	460	45.7
Administration	1,194	2.2	1,406	2.1	1,467	2.0	1,458	1.9	1,508	1.9	314	26.3
Research	3,285	6.1	2,283	3.3	2,597	3.6	3,257	4.3	4,084	5.1	799	24.3
Other	466	0.9	590	0.9	585	0.8	577	0.8	594	0.7	128	27.5

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[1] Each year's total includes MDs who are inactive, not classified and address unknown.

(a) Interns and Residents combined.

Source: Physician Distribution and Medical Licensure in the U.S., 1979, American Medical Association, Chicago, 1980.

This change reflected, in part, a normal pattern of change in the FMG working life as the alien remained in the U.S. health care delivery system. Additionally, the toughening of the English-language requirement and its impact upon new entrant exchange visitors, the increase in new USMGs, and the tapering of growth in first-year residency positions (all initiated prior to P.L. 94-484) contributed to the reduction in the number of new FMGs participating in U.S. training programs. FMG participation in GME dropped by about 3,500 over the nine-year period while total residents grew by about 13,000 (table IV-6).

While FMGs in hospital-based practice declined as a percentage of all active FMGs, their numbers nonetheless grew slightly - by less than 2,000 or about 7 percent (table IV-7). Thus, the 3,500 drop in FMG trainees had been more than offset by increases in FMG full-time physician staff, with FMGs representing more than two-thirds of the growth in this latter category (table IV-6). Much of this growth in full-time physician staff had occurred in the later years of the period, mirroring the sharp drop in FMG participation as trainees; however, both components grew significantly in 1979. Total full-time physician staff growth, characteristically lagging behind total physician growth in the nine-year period, outpaced total physician growth between 1976 and 1979 with nearly 50 percent of the overall growth attributable to FMGs. This crossing of growth patterns lends support to the hypothesis that FMG trainees were providing service first and receiving training second. That is, FMGs appeared to be "held on" as permanent staff in the face of declines in new trainees in order to maintain the needed level of hospital service delivery.

Table IV-6. Change in the Number of Physicians in Hospital-Based Practice by Country of Medical Education and Type of Position, 1970-1979, and Foreign-Trained Physicians as a Percent of Change

	Change, 1970-1979						
	Total		USMG/CMG		FMG		FMGs as a percent of change
	No.	Percent	No.	Percent	No.	Percent	
Total Hospital Based	21,102	24.5	19,270	32.7	1,832	6.7	
Training	13,066	25.5	16,628	48.1	-3,562	-21.4	
Staff	8,036	23.0	2,642	10.9	5,394	51.1	67.1

Source: See Table IV-1.

Table IV-7. Physicians in Hospital-Based Practice by Country of Medical Education, 1970 and 1979

	1970		1979	
	No.	Percent	No.	Percent
Total Hospital-Based	86,096	100.0	107,198	100.0
Training	51,228	59.4	64,294	60.0
Staff	34,868	40.6	42,904	40.0
USMG/CMG	58,885	100.0	78,155	100.0
Training	34,580	58.6	51,208	65.5
Staff	24,305	41.4	26,947	34.5
FMG	27,211	100.0	29,043	100.0
Training	16,648	61.2	13,086	45.1
Staff	10,563	38.8	15,957	54.9

Source: See Table IV-1.

Perhaps the most significant FMG practice contribution in recent years was in an unexpected area--office-based practice (table IV-8). The nine-year FMG growth in office-based practice (108 percent) accounted for nearly two-fifths of the total growth in this practice category. That is, office-based practitioners grew by about 57,000, with about 23,000 of them FMGs.

Thus, FMGs who represented 20 percent of the total supply of MDs accounted for 40 percent of the growth in office-based practice, sending the FMG representation in office-based practice from 11 percent in 1970 to nearly 18 percent in 1979 (table IV-9).

Analysis of the change in office-based physician supply by specialty groupings sheds additional light on FMG contributions and relative preferences. In 1970, U.S. and Canadian medical graduates--USMG/CMGs--entered general practice and the surgical specialties in greater percentages than did FMGs, while FMGs tended to enter the "Other Specialty" category, largely composed of anesthesiology, radiology, pathology and psychiatry. By 1979, USMG/CMG general practitioners in office-based practice had declined both numerically and in percentage representation. FMG general practitioners had declined as a percentage of total FMGs, unable to keep pace with rapid total FMG growth, but numerically had steadily risen (table IV-10) and helped to temper the decline in USMG/CMG participation in general practice (table IV-11). On the other hand, "Other Specialty" preferences of USMG/CMGs rose considerably while FMG preferences for these specialties grew only slightly.

Table IV-8. Trends in the Distribution of Foreign Medical Graduate MDs by Professional Activity for Select Years, 1970-1979, and Change in FMG Supply as a Percent of Total Change, 1970-1979

Specialty	Year					Change in FMG Supply		Change in Total MD Supply		Change in FMG Supply as A Percent of Total MD Change
	1970	1976	1977	1978	1979	1970 - 1979 Number	Percent	1970 - 1979 Number	Percent	1970 - 1979
Total MD's 1/	57,217	85,623	86,789	91,351	96,605	39,388	68.8	120,536	36.1	32.7
Estimated DHPA Active	54,404	79,722	78,800	83,976	89,465	35,061	64.4	104,050	33.4	33.7
Professionally Active	54,142	68,510	72,686	75,422	80,394	26,252	48.5	82,884	26.7	31.7
Total Patient Care	48,191	62,796	66,738	68,768	72,742	24,551	50.9	78,248	28.1	31.4
Office-Based Practice	20,980	33,539	39,559	42,112	43,699	22,719	108.3	57,146	29.7	39.8
Hospital Based Practice										
Residents[a]	16,648	16,634	13,146	11,941	13,086	(-3,562)	(-21.4)	13,116	25.6	-
MD Staff	10,563	12,623	14,033	14,715	15,957	5,394	51.1	8,036	23.0	67.1
Medical Teaching	1,006	1,435	1,299	1,362	1,466	460	45.7	1,935	34.6	23.8
Administration	1,194	1,406	1,467	1,458	1,508	314	26.3	(-40)	(-0.3)	-
Research	3,285	2,283	2,597	3,257	4,084	799	24.3	2,586	21.7	30.9
Other	466	590	585	577	594	128	27.5	155	5.9	82.6

1/ Each year's total includes MDs who are inactive, not classified and address unknown.

(a) Interns and Residents combined.

Source: See Table IV-1.

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Table IV-9. Trend in the Distribution of Foreign Trained Physicians as a Percent of Total Physicians by Professional Activity, 1970, 1976, and 1979

Activity	1970 Total	1970 FMG	1970 Percent FMG	1976 Total	1976 FMG	1976 Percent FMG	1979 Total	1979 FMG	1979 Percent FMG
Total MD's 1/	334,028	57,217	17.1	409,446	85,623	20.9	454,564	96,605	21.3
Estimated DHPA Active	311,179	54,404	17.5	376,120	79,722	21.2	415,229	89,465	21.5
Professionally Active	310,845	54,142	17.4	348,443	68,510	19.7	393,729	80,394	20.4
Total Patient Care	278,535	48,191	17.3	318,412	62,796	19.7	356,783	72,742	20.4
Office Based	192,439	20,980	10.9	216,553	33,539	15.5	249,585	43,699	17.5
Hospital Based									
Residents(a)	51,178	16,648	32.5	63,046	16,634	26.4	64,294	13,086	20.4
MD Staff	34,868	10,563	30.3	38,833	12,623	32.5	42,904	15,957	37.2
Medical Teaching	5,588	1,006	18.0	6,935	1,435	20.7	7,523	1,466	19.5
Administration	12,158	1,194	9.8	11,689	1,406	12.0	12,118	1,508	12.4
Research	11,929	3,285	27.5	8,514	2,283	26.8	14,515	4,084	28.1
Other	2,635	466	17.7	2,893	590	20.4	2,790	594	21.3
Not Classified	385	276	77.1	30,129	12,042	40.0	23,537	9,795	41.6
Address Unknown	3,204	978	30.5	8,757	2,788	31.8	8,960	3,741	41.8

1/ Each year's total includes physicians who are Inactive, Not Classified and Address Unknown.

(a) Interns and Residents combined.

Source: See Table IV-1.

Table IV-10. Physicians in Office-Based Practice by Major Specialty Categories and Country of Medical Education, 1970 and 1979

	1970		1979	
	No.	Percent	No.	Percent
Total Office-based	192,439	100.0	249,585	100.0
General Practice	52,023	27.0	46,920	18.8
Medical Specialty	44,428	23.1	61,989	26.8
Surgical Specialty	59,271	30.8	77,452	31.0
Other Specialty	36,717	19.1	58,224	23.3
USMG/CMG	171,459	100.0	205,886	100.0
General Practice	46,879	27.3	39,966	19.4
Medical Specialty	39,645	23.1	54,559	26.5
Surgical Specialty	53,941	31.5	65,611	31.9
Other Specialty	30,994	18.1	45,750	22.2
FMG	20,980	100.0	43,699	100.0
General Practice	5,144	24.5	6,954	15.9
Medical Specialty	4,783	22.8	12,430	28.4
Surgical Specialty	5,330	25.4	11,841	27.1
Other Specialty	5,723	27.3	12,474	28.5

Source: See Table IV-1.

Table IV-11. Change in the Number of Physicians in Office-Based Practice by Major Specialty Categories and Country of Medical Education, 1970-1979 and Foreign-Trained Physicians as a Percent of Change, 1970-1979

	Change, 1970-1979						FMGs as a Percent of Total Change
	Total		USMG/CMG		FMG		
	No.	Percent	No.	Percent	No.	Percent	
Total Office-based	57,146	29.7	34,427	20.1	22,719	108.3	39.8
General Practice	-5,103	-9.8	-6,913	-14.7	1,810	35.2	-
Medical Specialty	22,561	50.8	14,914	37.6	7,647	159.9	33.9
Surgical Specialty	18,181	30.7	11,670	21.6	6,511	122.2	35.8
Other Specialty	21,507	58.6	14,756	47.6	6,751	118.0	31.4

Source: See Table IV-1.

Impact on Practice Location

FMGs constitute a relatively similar percentage of all physicians in each of the demographic county classification groupings, with the exception of the most densely populated areas (counties with 5,000,000 or more inhabitants; table IV-12) and the Possessions. FMGs represented about 21 percent of all physicians but as much as 28 percent of all physicians in hospital-based practice. Moreover, FMGs comprised as much as 38 percent of all hospital-based practice physicians in the more rural areas (table IV-12). They represented nearly 60 percent of the youthful "not classified" physicians located in the most densely populated counties, further underscoring the inner-city reliance upon FMGs in hospital-based practice (table IV-12).

An aggregation of physician county classifications into Standard Metropolitan Statistical Areas (SMSA; categories 5-9, table IV-12) and non-SMSA (categories 1-4, table IV-12) areas reveals that while physician representation in non-SMSA counties was declining as a percentage, FMGs in non-SMSA counties nearly doubled, growing by over 90 percent (table IV-13).

In sum, FMGs represented highly significant contributions to physician growth in the most densely populated counties, particularly in hospital-based practice, and in non-SMSA counties, particularly in office-based practice. By locating in USMG-avoided sites, FMGs provide services to potentially deprived populations.

A statewide analysis shows that the same 10 States significantly dependent upon FMGs in 1970 were still the most dependent States in 1977. New Jersey

Table IV-12. Non-Federal Physicians, Total and Foreign-Trained, Hospitals, Hospital Beds, Population, and Income by Demographic County Classification, 1979

Demographic County Classification	Total Physicians				Total Patient Care				Office Based Practice			
	Total		FMG	Percent FMG of Total	Total		FMG	Percent FMG of Total	Total		FMG	Percent FMG of Total
	No.	%			No.	%			No.	%		
Total	427,073	100.0	89,119	20.9	341,482	100.00	69,397	20.3	248,931	100.0	43,565	17.5
Possessions	4,075	100.0	2,301	56.5	3,154	100.00	1,835	58.2	1,985	100.0	1,156	58.2
1 9,999	2,276	100.0	317	13.9	1,870	100.00	263	14.2	1,721	100.0	212	12.3
2 10,000-24,999	9,783	100.0	1,370	14.0	8,188	100.00	1,189	14.5	7,376	100.0	908	12.3
3 25,000-49,999	16,073	100.0	2,452	15.3	13,520	100.00	2,117	15.7	12,256	100.0	1,633	13.2
4 50,000+nonSMSA	23,246	100.0	3,486	15.0	19,268	100.00	2,949	15.3	16,568	100.0	2,316	14.0
5 Potential SMSA	5,888	100.0	873	14.8	4,820	100.00	720	14.9	3,817	100.0	551	14.3
6 50,000-499,999	74,835	100.0	10,606	14.2	61,492	100.00	8,573	13.9	47,674	100.0	5,883	12.3
7 500,000-999,999	57,716	100.0	10,895	18.9	46,676	100.00	8,571	18.4	32,919	100.0	5,337	16.3
8 1-4 million	165,644	100.0	33,903	20.5	129,690	100.00	25,754	19.9	90,554	100.0	15,871	17.5
9 5,000,000+	67,537	100.0	22,916	33.9	52,804	100.00	17,426	33.0	34,061	100.0	9,658	28.4

Demographic County (1978) Classification	Hospital Based Practice				Not Classified				Hospitals (1978)				Resident Population (1978)	
	Total		FMG	Percent FMG of Total	Total		FMG	Percent FMG of Total	Hospitals		Beds			
	No.	%			No.	%	No.	Total	No.	%	No.	%	No.	%
Total	92,551	100.0	25,832	27.9	23,537	100.0	9,795	41.6	6,074	100.0	991,189	100.0	219,768,500	100.0
Possessions	1,169	100.0	679	58.1	478	100.0	329	68.8	N.A.	-	N.A.	-	N.A.	-
1 9,999	149	100.0	51	34.2	101	100.0	35	34.7	497	8.2	19,143	1.9	4,374,900	2.0
2 10,000-24,999	812	100.0	281	34.6	394	100.0	118	29.9	994	16.4	59,606	6.0	14,953,300	6.8
3 25,000-49,999	1,264	100.0	484	38.3	651	100.0	194	29.8	778	12.4	76,186	7.7	17,021,200	7.7
4 50,000+nonSMSA	2,700	100.0	633	23.4	934	100.0	279	30.0	596	9.8	78,492	7.9	18,621,200	8.5
5 Potential SMSA	1,003	100.0	169	16.8	255	100.0	69	27.1	98	1.6	17,564	1.8	3,513,500	1.6
6 50,000-499,999	13,818	100.0	2,690	19.5	3,313	100.0	936	28.3	979	16.1	201,947	20.4	42,421,700	19.3
7 500,000-999,999	13,757	100.0	3,194	23.2	2,797	100.0	1,115	40.0	493	8.1	124,213	12.5	27,678,900	12.6
8 1-4 million	39,136	100.0	9,883	25.3	9,795	100.0	3,905	39.9	1,248	20.5	301,258	30.4	67,668,400	30.8
9 5,000,000+	18,743	100.0	7,768	41.4	4,819	100.0	2,815	58.4	391	6.4	112,780	11.4	23,515,400	10.7

Source: See Table IV-1.

Table IV-13. Non-Federal Physicians, Total and Foreign-Trained in Metropolitan and Non-Metropolitan Areas, 1970, 1979

	1970		1979	
	No.	Percent	No.	Percent
Total	301,323	100.0	427,073	100.0
SMSA	258,265	85.7	371,620	87.0
Non-SMSA	43,058	14.3	55,453	13.0
FMG[1]	56,239[2]	100.0	89,119	100.0
SMSA	51,053[2]	90.8	79,193	88.9
Non-SMSA	5,186[2]	9.2	9,926	11.1

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[1] The physicians with unknown addresses are excluded.

[2] Includes Federal FMGs due to data limitations.

Change in the Number of Total and Foreign-Trained Physicians in Metropolitan and Non-Metropolitan Areas, 1970-1979 and Foreign-Trained Physicians as a Percent of Change, 1970-1979.

	Change, 1970-1979				
	Total		FMG		FMGs as a Percent of Total Change
	No.	Percent	No.	Percent	
Total	125,750	41.7	32,880	58.5	26.1
SMSA	113,355	43.9	28,140	55.1	24.8
Non-SMSA	12,395	28.8	4,740	91.4	38.2

See footnotes previous Table.

Source: See Table IV-1.

and New York, with FMGs representing nearly 40 percent of their physician supply, led the list. In New Jersey growth was very large, while New York remained constantly highly dependent. With the exception of Illinois, Michigan, and Ohio, seven of the 10 States with greatest FMG reliance were located on or near the east coast (table IV-14).

The growth in FMG dependence in most of these States substantially outpaced national FMG growth. While FMGs represented between 17 and 20 percent of non-Federal physician supply, only two states in 1970 exceeded 30 percent reliance. By 1977, five States had FMG dependencies in excess of 30 percent with two others hovering at that level.

Performance on Standard Qualification Examinations

Receipt of a license to practice medicine is probably the most definitive indicator of the new entrant numerical impact of FMGs on the practicing physician supply pool. In the early 1970s, FMGs represented nearly one-half of the initial MD licenses issued in the U.S. Since the mid 1970s, the proportion of FMGs constituting initial licenses issued has dropped to less than 25 percent in 1978 and for the first time dropped below total FMG representation in 1979 to less than 18 percent (table IV-15).

However, these aggregate figures are misleading. The initial licensure trend of reliance upon FMGs in many of the top States with greatest FMG reliance paralleled the national trend. Some of these States displayed appreciable

Table IV-14. States Ranked According to Professionally Active Non-Federal FMGs as a Percent of the Total Number of Non-Federal MDs, 1977, and Compared with Similar Data for 1970

	Professionally active non-Federal MDs, 1977			Total MDs, 1970	
	Total	FMGs	Percent FMGs	Percent FMGs	
United States	340,601	67,170	19.7	17.1	
1977 Rank					1970 Rank
1. New Jersey	11,629	4,502	38.7	29.5	4
2. New York	39,648	14,861	37.5	35.6	1
3. Illinois	17,500	6,105	34.9	27.8	5
4. Delaware	836	288	34.4	27.7	6
5. West Virginia	2,245	753	33.5	23.8	8
6. Maryland	8,598	2,520	29.3	23.6	9
7. Rhode Island	1,699	493	29.0		2.5
8. Florida	14,028	3,837	27.4	30.1	2.5
9. Michigan	12,193	3,324	27.1	20.9	10.5
10. Ohio	14,945	4,050	27.1	23.9	7
11. Connecticut	6,487	1,385	21.4	20.9	10.5
12. Missouri	6,681	1,296	19.4	15.6	15
13. North Dakota	707	134	19.0	13.8	18
14. District of Columbia	2,963	555	18.7	19.1	12
15. Pennsylvania	18,980	3,477	18.3	14.5	17
16. Hawaii	1,495	268	17.9	16.4	13
17. Virginia	7,287	1,290	17.7	13.7	19
18. New Hampshire	1,269	215	16.9	13.2	20
19. Texas	17,101	2,747	16.1	10.3	25.5
20. Maine	1,416	219	15.5	14.7	16
21. Wisconsin	6,269	907	14.5	11.5	21
22. Kansas	3,071	441	14.4	10.3	25.5
23. Massachusetts	12,700	1,833	14.4	15.9	14
24. Indiana	6,020	836	13.9	8.6	30
25. Iowa	3,136	413	13.2	10.6	23
26. Georgia	6,270	797	12.7	7.8	32
27. Kentucky	4,028	509	12.6	9.7	27
28. Arizona	3,781	443	11.7	9.6	28
29. South Dakota	603	68	11.3	11.1	22
30. New Mexico	1,529	169	11.1	9.1	29
31. California	43,376	4,163	9.6	7.2	36
32. Nevada	780	73	9.4	2.4	49
33. Minnesota	6,306	588	9.1	10.3	26
34. Tennessee	5,731	500	8.7	6.1	35
35. Louisiana	5,035	413	8.2	5.5	37
36. Oklahoma	3,173	261	8.2	3.6	43.5
37. Vermont	903	71	7.9	8.2	31
38. Washington	5,836	453	7.8	7.7	33
39. Wyoming	401	30	7.5	3.6	43.5
40. Alabama	3,972	287	7.2	4.6	40.5
41. North Carolina	7,211	516	7.2	5.1	38
42. South Carolina	3,143	209	6.6	3.7	44
43. Nebraska	2,006	128	6.3	3.8	42.5
44. Alaska	389	24	6.2	5.2	39
45. Mississippi	2,213	131	5.9	3.2	47
46. Oregon	3,020	158	5.2	4.4	40.5
47. Montana	677	34	5.0	3.3	42.5
48. Colorado	4,633	199	4.3	5.9	36
49. Arkansas	2,080	75	3.6	3.3	51
50. Utah	1,958	54	2.7	2.7	48
51. Idaho	863	16	1.8	1.9	50

SOURCE: Foreign Medical Graduates in the U.S., 1970. Chicago, AMA, 1971, Table 8, p. 25. Physician Distribution and Medical Licensure in the U.S., 1977. Chicago, American Medical Association, 1978, Table 8 and Table 38.

Table IV-15. Total Initial Licenses Issued and Those Issued by Examination Only by State Boards of Medical Examiners, 1965-1979

Year	Total			Examination			Endorsement		
		FMGs			FMGs			FMGs	
		No.	%		No.	%		No.	%
1950	6,002	308	5.1	4,609	267	5.8	1,393	41	2.7
1951	6,273	350	5.6	4,985	425	8.5	1,288	25	1.9
1952	6,885	569	8.3	5,168	545	10.5	1,717	24	1.4
1953	7,276	685	9.4	5,388	662	12.3	1,888	23	1.2
1954	7,917	772	9.8	5,897	749	12.7	2,020	23	1.1
1955	7,737	907	11.7	6,211	881	14.2	1,526	26	1.7
1956	7,463	853	11.4	6,035	834	13.8	1,428	18	1.3
1957	7,455	1,014	13.6	5,872	991	16.9	1,583	23	1.5
1958	7,809	1,166	14.9	6,155	1,129	18.3	1,654	37	2.2
1959	8,269	1,626	19.7	6,490	1,605	24.7	1,779	21	1.2
1960	8,030	1,419	17.7	6,225	1,383	22.2	1,805	36	2.0
1961	8,023	1,580	19.7	6,137	1,557	25.4	1,886	23	1.2
1962	8,005	1,357	17.0	5,687	1,333	23.4	2,318	24	1.0
1963	8,283	1,451	17.5	5,812	1,409	24.2	2,471	42	1.7
1964	7,991	1,306	16.5	5,239	1,239	23.6	2,672	67	2.5
1965	9,147	1,528	16.7	5,699	1,468	25.8	3,448	60	1.7
1966	8,851	1,634	18.5	5,692	1,576	27.7	3,159	58	1.8
1967	9,424	2,081	22.1	5,940	2,004	33.7	3,484	77	2.2
1968	9,776	2,185	22.4	6,133	2,082	33.9	3,633	103	2.8
1969	9,978	2,307	23.1	6,074	2,196	36.2	3.904	111	2.8
1970	11,032	3,016	27.3	6,729	2,830	42.1	4,303	186	4.3
1971	12,257	4,314	35.2	7,743	4,131	53.4	4,514	183	4.1
1972	14,476	6,661	46.0	9,760	6,442	66.0	4,716	219	4.6
1973	16,689	7,419	44.5	10,752	7,247	67.4	5,937	172	2.9
1974	16,706	6,613	39.6	9,916	6,425	64.8	6,790	188	2.8
1975	16,859	5,965	35.4	8,990	5,838	64.9	7,869	127	1.6
1976	17,724	6,436	36.3	9,598	6,330	66.0	8,126	106	1.3
1977	18,175	5,861	32.2	8,836	5,790	65.5	9,339	61	0.7
1978	19,393	4,578	23.6	8,131	4,540	55.8	11,262	38	0.3
1979	19,896	3,566	17.9	7,931	3,522	44.4	11,965	44	0.4

Source: See Table IV-1.

opposite trends and still others in that group had varying trends. In Maryland, for example, the numbers of FMG initial licenses dropped in 1977 to the 1970 level, but in 1978 jumped to a point where it represented more than 250 percent of the 1970 and 1977 levels. In 1979, the number halved. For New Jersey, the number halved between 1970 and 1976, then rose steadily between 1976 and 1978, and stabilized in 1979. For other States such as California and Georgia growth had been steady, unlike that of the Nation (table IV-16). For the States with greatest FMG reliance whose trends paralleled the Nation's, their reliance upon FMGs as initial licentiates was still far in excess of the Nation's. In 1979, FMGs received 60 percent of all initial licenses issued in New Jersey and about 45 percent in Florida; in Maryland, Oklahoma, Michigan, and Nebraska, FMG initial licenses exceeded 30 percent of the total and in Maine, nearly two-thirds (table IV-16).

The majority of USMG/CMG new licentiates was by endorsement of their passage of the NBME exam (table IV-15). FMGs receiving new licenses by State examination represented as much as two-thirds of all the successful examinees in the mid-1970s and represented the majority in 1979. Thus, the paths for formal entry into practice are dissimilar for FMGs and USMG/CMGs. Attempts have been made in recent years to "shore up" the State licensure examinations by issuing a Federal Licensure Examination (FLEX), but nevertheless it, too, is not identical to the NBME.

Another source of dissimilar credentialing of FMGs and USMG/CMGs is the ECFMG exam. While the VQE (an NBME-derived exam) is the prerequisite exam for other than family preference alien admission to AMA-approved GME programs, the ECFMG exam is the qualifier for family preference alien physicians and USFMGs.

Table IV-16. Foreign Medical Graduates Receiving Initial Licenses by Examination from Select State Boards that Displayed Similar and Opposite Trends as Observed Nationally; 1970, 1976-1979

	1970	1976	1977	1978	1979
Total (U.S.)	2,630	6,330	5,791	4,540	3,522
			Similar Trend		
D.C.	149	512	461	117	19
Florida	138	853	547	268	234
Illinois	107	335	322	152	166
Maine	107	237	245	182	186
Michigan	91	602	549	347	310
New York	91	893	734	526	514
Pennsylvania	550	548	457	312	217
Texas	77	132	175	135	105
Virginia	61	179	146	121	31
			Opposite Trend		
California	94	184	222	287	253
Georgia	6	108	162	180	206
Maryland	140	290	148	533	241
Massachusetts	47	102	99	237	97
New Jersey	362	165	198	231	201

Initial Licenses Issued by Examination, and Reciprocity and Endorsement by Select State Boards of Medical Examiners, 1979

	All MD's	FMGs	FMGs as a Percent of All MD's
Total	19,896	3,564	17.9
California	2,339	253	10.8
Virginia	404	44	10.9
Texas	1,069	116	10.9
Connecticut	696	101	14.5
Massachusetts	630	97	15.4
Pennsylvania	1,140	217	19.0
New York	2,457	514	20.9
Illinois	767	166	21.6
Oklahoma	206	62	30.1
Michigan	980	310	31.6
Maryland	753	242	32.1
Nebraska	111	37	33.3
Georgia	491	206	42.0
Florida	524	234	44.7
New Jersey	342	201	58.8
Maine	283	187	66.1

Source: See Table IV-1.

Moreover, examination performance is significantly inferior for those who take the exam domestically (table IV-17). Although the argument is sometimes made that the passage of an exam, regardless of its difficulty, is not the only measure of a "good" physician, and that the passers of the NBME are not necessarily "better" physicians than the passers of the other exams, there are capability differentials between the domestic and foreign takers of the same exam. This differential has been consistently significant for the last 22 years. Sitters for the exam in the U.S. and Canada, in large part family preference aliens and USFMGs, have more trouble passing the ECFMG exam than the balance of the alien physician pool.

This performance differential does not imply that the domestic passers are any less qualified than the foreign passers, those who ultimately enter the system. Rather, it provides insight as to the size of the pool of failers and their potential impact upon the system. In 1978, for the first time since 1972, ECFMG repeaters exceeded first takers. This difference was sustained in 1979. Moreover, this concern about the residual pool of failers is magnified as the difficulty of the examinations, anticipated for the future, intensifies. If the Foreign Medical Graduate Examination in the Medical Sciences is administered as of July, 1984 for all FMGs--alien and U.S. citizen--the pool of domestic failers is bound to increase. Their impact on non-AMA approved GME and employment in other settings is a significant policy focus for the future.

Table IV-17. ECFMG EXAMINATIONS, 1958-1979 SUMMARY OF RESULTS

Examination Centers	1958-1968	1959	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Total 1958-1979
						All Scores							
Total	163,209	22,598	29,950	31,033	32,072	37,023	37,447	36,799	29,483	25,871	17,022	17,670	480,177
Domestic**	60,058	5,703	7,339	8,003	8,868	9,383	9,156	9,149	8,928	8,645	8,288	8,759	152,279
Foreign	103,151	16,895	22,611	23,030	23,204	27,640	28,291	27,650	20,555	17,226	8,734	8,911	327,898
Percent Foreign	63.2	74.8	75.5	74.2	72.3	74.7	75.7	75.1	69.7	66.6	51.3	50.4	68.3
					SCORES 75 OR HIGHER								
Total													
Number	64,940	8,127	11,916	9,693	12,837	12,289	14,888	13,628	13,730	8,602	5,726	6,772	183,129
Percent	39.8	36.0	39.8	31.2	40.0	33.2	39.7	37.0	46.5	33.2	33.6	38.3	38.1
Domestic**													
Number	22,523	1,216	1,789	1,518	2,589	1,956	2,547	2,047	2,870	1,908	2,128	2,759	45,850
Percent	34.7	21.3	24.4	19.0	29.2	20.8	27.8	22.7	32.1	22.1	25.7	31.5	30.1
Foreign													
Number	42,417	6,911	10,127	8,175	10,248	10,333	12,321	11,555	10,860	6,694	3,598	4,013	137,252
Percent	65.3	40.9	44.8	35.5	44.2	37.4	43.6	41.7	52.8	38.8	41.7	45.0	41.8

*From March 1958 through February 1972, these examinations have been held each year in the winter and in the summer or early fall. Since 1972, they have been held each January and July. The results for the examinations each year are combined.

**United States and Canada.

NUMBER TAKING ECFMG EXAMINATION FIRST TIME AND NUMBER OF REPEATERS, 1958-1979

No. Times Tested	Total 1958-1968	Total 1958-1979	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Total	163,209	462,507	22,628	29,950	31,033	32,072	37,023	37,447	36,800	29,483	25,871	17,022	17,670
First Exam.	98,472	257,026	12,477	16,631	16,525	15,556	18,694	19,711	20,415	16,799	14,041	7,735	8,617
Repeat Exam.	64,737	205,481	10,151	13,319	14,508	15,516	18,329	17,736	16,385	12,684	11,830	9,287	9,053
% Taking First Exam.	60.3	55.6	55.1	55.5	53.2	48.5	50.4	52.7	55.5	56.9	54.2	45.4	48.8

Source: See table IV-1.

Chapter V

Analysis of the Supply of U.S. Citizen Foreign Medical Graduates

Introduction

The recent growth in the number of U.S. citizen foreign medical graduates (USFMGs) has been detailed in an earlier chapter. The purpose of this chapter is to provide an analysis of the specialty, activity, and location patterns of these physicians, to determine their impact on overall FMG practice profiles, and to provide some insight into the possible future FMG practice picture as USFMGs become a larger component.

According to data compiled by the American Medical Association (AMA), as of December 31, 1979, there were slightly more than 9000 U.S. citizen foreign medical school graduates (USFMGs) who were classified as professionally active in this country. As shown in table V-1, these USFMGs comprised 2.3 percent of the total supply of MDs who were classified as professionally active and 11.2 percent of all active MDs who did not graduate from U.S. or Canadian medical schools. The AMA also counted an additional 1145 USFMGs (or 11.2 percent of the total supply) in that year whose activity status could not be identified. These MDs are excluded from all analyses which follow.

The overwhelming majority (95 percent) of USFMGs are males (table V-1). This is in contrast to their foreign citizen FMG counterparts, among whom

Table V-1. Number and Percent Distribution of Professionally Active MDs by Sex According to Country of Medical Education, 1979

Sex	Number					Percent Distribution					Percent USFMGs of total MDs	Percent USFMGs of total FMGs
	Total	USMGs	CMGs	USFMGs	Other FMGs	Total	USMGs	CMGs	USFMGs	Other FMGs		
Total professionally active	393,729	307,359	3,871	8,037	71,382	100.0	100.0	100.0	100.0	100.0	2.0	11.2
Male	353,790	281,788	3,499	8,353	57,969	89.9	91.7	92.1	90.8	81.2	2.0	12.0
Female	39,939	25,571	472	479	13,413	10.1	8.3	7.9	9.2	18.8	1.2	5.9

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

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female MDs account for nearly one-fifth (19 percent) of the active supply. There is interest in the relatively "new" and growing component of the U.S. citizen foreign medical graduate supply--the substantial proportion of young MDs in GME programs who are largely graduates of foreign medical schools established since 1970. However, more than half (51.7 percent) of all practicing USFMGs were 45 years of age or older in 1979; more than one-fifth (21.4 percent) were aged 55 years or older as table V-2 shows. This age distribution reflects the large proportion of older, office-based, and hospital staff practitioners among the active supply. The median age of USFMGs in office-based practice was 49.6 years or 4.9 years higher than the median age of their foreign citizen counterparts in office-based practice and 5.8 years older than U.S. medical school graduates in office-based practice (table V-3). Similarly, the median age of USFMG hospital staff physicians (47.1 years) was 4.3 years and 7.4 years higher, respectively, than that of comparable alien FMGs and USMGs. These older U.S. citizen foreign medical graduates are primarily graduates of foreign medical schools other than those which were established during the 1970s. The analyses which follow do not differentiate the practice patterns of USFMGs according to schools of graduation. However, differences between the patterns of those USFMGs in training and those in practice indicate, to some extent, differences that may exist between graduates of the newer schools and graduates of the older foreign medical schools.

Activity Patterns

More than 94 percent of all USFMGs were engaged in patient care activities in 1979 as table V-4 illustrates. More than one-fifth (22.1 percent) of USFMGs

Table V-2. Number and Percent Distribution of Professionally Active MDS by Age According to Country of Medical Education, 1979

Years of age	Number			Percent distribution		
	USMGs	USFMGs	Alien FMGs	USMGs	USFMGs	Alien FMGs
Total	307,359	9,037	71,362	100.0	100.0	100.0
30	40,600	608	3,669	13.2	6.7	5.1
30-34	49,088	1,601	12,249	16.0	17.7	17.2
35-39	38,370	1,127	14,693	12.5	12.5	20.6
40-44	33,257	1,021	12,595	10.8	11.3	17.6
45-49	32,270	1,358	8,940	10.5	15.0	12.5
50-54	29,498	1,387	7,573	9.6	15.3	10.6
55-59	30,673	494	5,083	10.0	5.5	7.1
60-64	21,835	362	2,410	7.1	4.0	3.4
65-69	16,112	635	2,142	5.2	7.0	3.0
70+	15,656	444	2,008	5.1	4.9	2.8
Median age in years	43.9	44.0	42.0			

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

Table V-3. Percent Distribution by Age and Median Age of MDs Providing Patient Care According to Country of Medical Education, 1979

Years of age	Hospital-based practice						Office-based practice		
	Residents			Staff MDs					
	USMGs	USFMGs	Alien FMGs	USMGs	USFMGs	Alien FMGs	USMGs	USFMGs	Alien FMGs
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
under 30	68.8	29.2	26.9	9.6	1.0	2.0	1.1	0.1	0.5
30-34	26.0	51.8	45.5	25.4	14.2	13.3	11.7	6.1	9.6
35-39	4.0	13.3	17.0	16.1	13.5	22.9	14.0	11.9	20.9
40-44	0.8	3.4	6.5	11.1	14.0	20.7	13.1	13.7	20.0
45-49	0.2	1.4	2.6	9.3	17.3	13.8	13.0	19.6	15.1
50-54	0.1	0.8	1.2	7.4	17.3	11.0	12.1	20.1	13.3
55-59	0.1	0.3	0.4	8.2	7.7	6.9	12.5	7.0	9.0
60-64	--	--	--	5.8	4.9	4.2	9.0	5.1	3.9
65-69	--	--	--	4.0	5.9	3.1	6.7	9.7	3.8
70+	--	--	--	3.2	4.2	2.1	6.7	6.7	3.9
Median age in years	28.7	32.0	32.5	39.7	47.1	42.8	43.8	49.6	44.7

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

were in the training component of hospital-based practice. However, office-based practice predominated as the activity of USFMGs, accounting for nearly 60 percent of those who were classified as professionally active. The remaining 13 percent of those engaged in patient care activities were hospital staff MDs.

The number of U.S. citizen foreign medical graduates engaged in each of these activities is small in comparison with the total supply. However, as table V-4 further illustrates, the representation of USFMGs in training and among hospital staff physicians is slightly higher than their representation among the total supply of active physicians. USFMGs comprised about 3 percent of all MDs in training and on hospital staff.

The activity profile of those USFMGs who are not in training and who are engaged in patient care activities lies between that of USMGs and that of alien FMGs. Like their foreign citizen FMG counterparts, a comparatively higher proportion of USFMGs than of USMGs were practicing as hospital staff physicians in 1979. The proportion of FMGs who were hospital staff physicians was 62 percent higher than the proportion of staff physicians among USFMGs (21 percent compared with 13 percent). However, both proportions were notably higher than the comparable proportion among USMGs (9 percent). On the other hand, the proportion of USFMGs in office-based practices (59 percent) was greater than the comparable proportion of alien FMGs (54 percent) yet smaller than the proportion of USMGs (66 percent) in office-based practices.

Table V-4. Number and Percent Distribution of Professionally Active MDs by Activity Status According to Country of Medical Education, 1979

	Number					Percent distribution					USFMGs as percent of total	Alien FMGs as percent of total	Percent USFMG of total FMGs
	Total	USMGs	CMGs	USFMGs	Alien FMGs	Total	USMGs	CMGs	USFMGs	Alien FMGs			
Total	393,729	307,359	5,971	9,037	71,362	100.0	100.0	100.0	100.0	100.0	2.3	18.1	11.2
Patient care	356,783	278,838	5,198	8,513	64,234	90.6	90.7	87.1	94.2	90.0	2.4	18.0	11.7
Residents	64,294	50,844	364	1,995	11,091	16.3	16.5	6.1	22.1	15.5	3.1	17.3	15.2
Staff Physicians	42,904	26,461	486	1,174	14,783	10.9	8.6	8.1	12.9	20.7	2.7	34.5	7.4
Office-based practice	249,585	201,533	4,348	5,344	38,360	63.4	65.6	72.8	59.1	53.8	2.1	15.4	12.2
Teaching	7,523	5,900	157	66	1,400	1.9	1.9	2.6	0.7	2.0	0.9	18.6	4.5
Administration	12,118	10,330	280	207	1,301	3.1	3.4	4.7	2.3	1.8	1.7	10.7	13.7
Research	14,515	10,162	269	187	3,897	3.7	3.3	4.5	2.1	5.5	1.3	26.8	4.6
Other	2,790	2,129	67	64	530	0.7	0.7	1.1	0.7	0.7	2.3	19.0	10.8

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

Specialty Patterns

USFMGs currently comprise a small proportion of the active supply of physicians in each specialty (table V-5). Nonetheless, a larger proportion of the active supply of USFMGs practice in the primary care specialties than in any other major specialty grouping as table V-6 illustrates. In 1979, 42 percent of USFMGs were primary care specialists. This figure compares with 40 percent of USMGs and 35 percent of alien FMGs. The proportions of USFMGs in other medical specialties and in the surgical specialties generally parallel the proportions of USMGs and alien FMGs. However, like USMGs the USFMGs are not as likely as alien FMGs to practice in the other (non-medical, non-surgical) specialties. While 26-27 percent of USMGs and USFMGs practiced in the other (non-medical, non-surgical) specialties in 1979, 36 percent of alien FMGs were practicing in these specialties. In large part, differences in these percentages reflect that USFMGs generally do not favor the traditionally "FMG-preferred" specialties (table V-5).

The specialty distribution of USFMG residents is of particular interest because of the implications of the effects of this growing component of physician supply on the future character of total FMG specialty patterns and on total physician specialty patterns. As table V-7 indicates, the largest proportions of residents in 1979 chose GME programs in internal medicine, general surgery, obstetrics and gynecology, family practice, pediatrics, and psychiatry. Nearly three-fourths of all USFMGs in GME were in programs in these specialties, with nearly half (46 percent) in primary care.

Table V-5. Number and Percent Distribution of Professionally Active MDs by Specialty According to Country of Medical Education, 1979

	Number					Percent distribution					Percent USFMG of of total	Percent Alien FMG of total
	Total	USMGs	CMGs	USFMGs	Alien FMGs	Total	USMGs	CMGs	USFMGs	Alien FMGs		
Total	393,729	307,359	5,971	9,037	71,362	100.0	100.0	100.0	100.0	100.0	2.3	18.1
Allergy	1,509	1,298	22	40	149	0.4	0.4	0.4	0.4	0.2	2.7	9.9
Aerospace medicine	577	527	8	8	34	0.1	0.2	0.1	0.1	0.0	1.4	5.9
Anesthesiology	15,367	9,249	295	331	5,492	3.9	3.0	4.9	3.7	7.7	2.2	35.7
Cardiovascular disease	8,767	6,670	104	146	1,847	2.2	2.2	1.7	1.6	2.6	1.7	21.1
Child psychiatry	3,163	2,347	65	72	679	0.8	0.8	1.1	0.8	1.0	1.3	21.5
Colon and rectal surgery	721	575	23	12	111	0.2	0.2	0.4	0.1	0.2	1.7	15.4
Dermatology	5,483	4,937	85	129	332	1.4	1.6	1.4	1.4	0.5	2.4	6.1
Diagnostic radiology	6,532	5,206	70	113	1,143	1.7	1.7	1.2	1.3	1.6	1.7	17.5
Forensic pathology	234	164	5	10	55	0.1	0.1	0.1	0.1	0.1	4.3	23.5
Family practice	24,924	21,544	339	582	2,459	6.3	7.0	5.7	6.4	3.4	2.3	9.9
Gastroenterology	3,495	2,776	46	75	598	0.9	0.9	0.8	0.8	0.8	2.1	17.1
General practice	33,206	26,499	647	983	5,077	8.4	8.6	10.8	10.9	7.1	3.0	15.2
General preventive medicine	769	660	17	12	80	0.2	0.2	0.3	0.1	0.1	1.6	10.4
General surgery	33,217	25.825	424	570	6,398	8.4	8.4	7.1	6.3	9.0	1.7	19.2
Internal medicine	68,591	54,500	719	1,646	11,726	17.4	18.2	12.0	18.2	16.4	2.4	17.1
Neurology	5,381	4,116	108	95	1,062	1.4	1.0	1.8	1.1	1.5	1.8	19.7
Neurological surgery	3,268	2,618	84	43	523	0.8	0.5	1.4	0.5	0.7	1.3	16.0
Obstetrics and gynecology	25,215	19,590	360	725	4,540	6.4	8.1	6.0	8.0	5.4	2.9	18.0
Occupational medicine	2,356	2,072	54	35	195	0.6	0.4	0.9	0.4	0.3	1.5	8.3
Ophthamology	12,619	11,238	233	278	870	3.2	3.2	3.9	3.1	1.2	2.2	6.9
Orthopedic surgery	13,506	11,782	236	268	1,220	3.4	3.1	4.0	3.0	1.7	2.0	9.0
Otorhinolaryngology	6,410	5,337	113	149	811	1.6	1.7	1.9	1.6	1.1	2.3	12.7
Psychiatry	26,860	19,448	505	810	6,097	6.8	8.7	8.5	9.0	8.5	3.0	22.7
Pediatrics	26,696	19,915	263	595	5,923	6.8	6.0	4.4	6.6	8.3	2.2	22.2
Pediatric allergy	454	370	6	8	70	0.1	0.1	0.1	0.1	0.1	1.8	5.4
Pediatric cardiology	632	438	8	10	176	0.2	0.1	0.1	0.1	0.2	1.6	27.8
Public health	2,312	1.991	47	52	222	0.6	0.6	0.8	0.6	0.3	2.2	9.6
Physical Med. & Rehabilitation	2,084	1,108	28	97	851	0.5	0.4	0.5	1.1	1.2	4.7	40.8
Plastic surgery	2,883	2,358	62	49	414	0.7	0.8	1.0	0.5	0.6	1.7	14.4
Pathology	13,302	8,952	239	183	3,928	3.4	2.9	4.0	2.0	5.5	1.4	29.5
Pulmonary diseases	3,225	2,381	60	63	721	0.8	0.8	1.0	0.7	1.0	2.0	22.4
Radiology	11,712	9,451	164	213	1,884	3.0	3.1	2.7	2.4	2.6	1.8	16.1
Therapeutic radiology	1,516	1,009	20	18	469	0.4	0.3	0.3	0.2	0.7	1.2	30.9
Thoracic surgery	2,215	1,671	34	12	498	0.6	0.5	0.6	0.1	0.7	0.5	22.5
Urology	7,561	6,037	116	176	1,232	1.9	2.0	1.9	1.9	1.7	2.3	16.3
Other specialties	10,723	8,434	193	207	1,889	2.7	2.7	3.2	2.3	2.6	1.9	17.6
Unspecified	6,244	4,266	169	222	1,587	1.6	1.4	2.8	2.5	2.2	3.6	25.4

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

Table V-6. Percent Distribution of MDs Engaged in Patient Care Activities by Major Specialty Category According to Country of Medical Education, 1979

Specialty Category	All activities				Residents				Hospital staff MDs				Office-based MDs			
	Total	USMG	USFMG	Alien FMG	Total	USMG	USFMG	Alien FMG	Total	USMG	USFMG	Alien FMG	Total	USMG	USFMG	Alien FMG
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Primary care	39.1	39.8	42.1	35.3	46.7	48.5	46.2	38.5	30.8	31.7	31.3	29.0	39.3	39.4	44.0	37.8
General/Family practice	14.7	15.6	17.3	10.6	9.3	10.5	10.4	3.5	9.1	9.4	10.9	8.3	18.8	19.4	22.5	15.0
Internal medicine	17.5	17.7	18.2	16.4	28.9	29.9	29.0	24.2	15.2	16.1	14.9	13.5	14.2	14.1	14.8	14.7
Pediatrics	6.8	6.5	6.6	8.2	8.5	8.1	6.8	10.8	6.6	6.2	5.5	7.3	6.3	6.0	6.8	8.1
Other medical specialties	6.0	6.1	5.2	5.5	1.2	1.4	0.5	0.4	5.7	6.1	4.3	4.9	6.5	6.6	6.6	5.7
Surgical specialties	27.3	28.3	25.3	23.3	28.1	28.2	34.5	26.5	18.2	19.6	17.2	15.7	31.0	31.8	25.2	27.4
Other specialties	27.6	25.7	27.4	36.0	24.0	21.9	18.8	34.6	45.4	42.5	47.1	50.4	23.3	22.1	24.2	29.2

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

Table V-7. Number and Percent Distribution of Residents by Specialty According to Country of Medical Education, 1979

	Number					Percent distribution					USFMGs as percent of total	Alien FMGs as percent of total	USFMGs as percent of total FMGs
	Total	USMG	CMG	USFMG	Alien FMG	Total	USMG	CMG	USFMG	Alien FMG			
Total	64,294	50,844	364	1,995	11,091	100.0	100.0	1.00	100.0	100.0	3.1	17.3	15.2
Allergy	--	--	--	--	--	-	-	-	-	-	-	-	-
Aerospace medicine	29	26	1	--	2	0.0	0.1	0.3	-	0.0	-	6.9	-
Anesthesiology	1,725	1,033	17	44	631	2.7	2.0	4.7	2.2	5.7	2.6	36.6	6.5
Cardiovascular disease	--	--	--	--	--	-	-	-	-	-	-	-	-
Child psychiatry	317	195	6	8	108	0.5	0.4	1.6	0.4	1.0	2.5	34.1	6.9
Colon and rectal surgery	28	21	--	--	7	0.0	0.0	-	-	0.1	-	25.0	-
Dermatology	678	630	9	10	29	1.1	1.2	2.5	0.5	0.3	1.5	4.3	25.6
Diagnostic radiology	1,444	1,151	7	38	248	2.2	2.3	1.9	1.9	2.2	2.6	17.2	13.3
Forensic pathology	5	5	--	--	--	0.0	0.0	-	-	-	-	-	-
Family practice	5,979	5,363	26	207	383	9.3	10.5	7.1	10.4	3.5	3.5	6.4	35.1
Gastroenterology	--	--	--	--	--	-	-	-	-	-	-	-	-
General preventive medicine	69	58	2	--	9	0.1	0.1	0.5	-	0.1	-	13.0	-
General surgery	7,501	5,812	23	236	1,430	11.7	11.4	6.3	11.8	12.9	3.1	19.1	14.2
Internal medicine	18,540	15,179	95	578	2,688	28.8	29.9	26.1	29.0	24.2	3.1	14.5	17.7
Neurology	1,035	815	9	21	190	1.6	1.6	2.5	1.1	1.7	2.0	18.4	10.0
Neurological surgery	481	364	3	9	105	0.7	0.7	0.8	0.5	0.9	1.9	21.8	7.9
Obstetrics and gynecology	4,225	3,296	11	222	696	6.6	6.5	3.0	11.1	6.3	5.3	16.5	24.2
Occupational medicine	20	14	1	1	4	0.0	0.0	0.3	0.1	0.0	5.0	20.0	20.0
Ophthamology	1,490	1,362	9	38	81	2.3	2.7	2.5	1.9	0.7	2.6	5.4	31.9
Orthopedic surgery	2,125	1,845	6	83	191	3.3	3.6	1.6	4.2	1.7	3.9	9.0	30.3
Otorhinolaryngology	788	629	7	31	121	1.2	1.2	1.9	1.6	1.1	3.9	15.4	20.4
Psychiatry	3,489	2,467	23	102	897	5.4	4.9	6.3	5.1	8.1	2.9	25.7	10.2
Pediatrics	5,469	4,107	28	136	1,198	8.5	8.1	7.7	6.8	10.8	2.5	21.9	11.4
Pediatric allergy	28	20	--	--	8	0.0	0.0	-	-	0.1	-	28.6	-
Pediatric cardiology	54	47	--	--	7	0.1	0.1	-	-	0.1	-	13.0	-
Public health	25	20	--	--	5	0.0	0.0	-	-	0.0	-	20.0	-
Physical Medicine and Rehabilitation	328	138	2	17	171	0.5	0.3	0.5	0.9	1.5	5.2	52.1	9.0
Plastic surgery	338	263	3	10	62	0.5	0.5	0.8	0.5	0.6	3.0	18.3	13.9
Pathology	2,232	1,563	16	22	631	3.5	3.1	4.4	1.1	5.7	1.0	28.3	3.4
Pulmonary diseases	--	--	--	--	--	-	-	-	-	-	-	-	-
Radiology	1,083	797	8	36	242	1.7	1.6	2.2	1.8	2.2	3.3	22.3	12.9-
Therapeutic radiology	211	113	3	2	93	0.3	0.2	0.8	0.1	0.8	0.9	44.1	2.1
Thoracic surgery	237	175	2	1	59	0.4	0.3	0.5	0.1	0.5	0.4	24.9	1.7
Urology	845	593	6	59	187	1.3	1.2	1.6	3.0	1.7	7.0	22.1	24.0
Other specialties	--	--	--	--	--	-	-	-	-	-	-	-	-
Unspecified	3,476	2,743	41	84	608	5.4	5.4	11.3	4.2	5.5	2.4	17.5	12.1

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

In general these were the programs chosen by the largest proportions of USMGs and alien FMGs, except that alien FMGs were more likely to choose programs in anesthesiology and pathology than were USFMGs or USMGs and were far less likely than these groups to choose programs in family practice. The proportion of family practice residents among USFMGs and USMGs was 3 times the comparable proportion of alien FMGs (table V-7).

Although the number of USFMG residents in each specialty is relatively small, their representation among residents in several specialties is disproportionately high. These specialties and the constituent proportion of USFMGs include obstetrics/gynecology (5.3 percent), occupational medicine (5.0 percent), orthopedic surgery (3.9 percent), otorhinolaryngology (3.9 percent), physical medicine and rehabilitation (5.2 percent), and urology (7.0 percent). Further, USFMGs contribute disproportionately to total FMG resident participation in several GME programs--most notably family practice. In 1979 about 15 percent of all foreign medical graduates in residency programs were USFMGs yet 35 percent of the FMGs in family practice residency programs were USFMGs. Other residency programs in which more than 15 percent of all FMGs were USFMGs include dermatology (25.6 percent), internal medicine (17.7 percent), obstetrics-gynecology (24.2 percent), occupational medicine (20.0 percent), ophthamology (31.9 percent), orthopedic surgery (30.3 percent), otorhinolaryngology (20.4 percent), and urology (24.0 percent).

Alternatively, USFMGs represented a relatively small proportion of the total number of FMGs in residency programs in anesthesiology, child psychiatry, colon and rectal surgery, neurological surgery, physical medicine and rehabilitation, pediatric allergy, pathology, therapeutic radiology and thoracic surgery. These are all programs in which foreign citizen FMGs represented disproportionately high fractions of the total residents (table V-7).

In sum, the increasing influence of USFMGs on the total supply of FMGs would most notably result in greater FMG participation in family practice and a concomitant decline in FMG participation in those specialties which have traditionally been considered as "FMG-preferred."

The specialty distribution of USFMGs in training programs at the present time indicates the likelihood of some redistribution of the specialty of practice of office-based and hospital staff USFMGs away from general/family practice towards internal medicine and the surgical specialties as these residents move to later stages of their worklife. Currently, 44 percent of USFMGs in office-based practice are primary care specialists; slightly more than half of these primary care specialists (23 percent) are general/family practice MDs. While about half of all USFMG residents were training in the primary care specialties in 1979, 30 percent were in internal medicine programs and about 11 percent were in family practice programs. While one-quarter of USFMGs in office-based practice were in the surgical specialties, this proportion is likely to increase somewhat in the future as a result of the fact that 35 percent of USFMG residents were training in surgical specialty programs. The proportion of USFMG residents in surgical specialty programs was notably higher than the comparable proportions of USMG (28 percent) and alien FMG (27 percent) residents.

Location Patterns

In 1979 more than 60 percent of all USFMGs were located in California, New Jersey, New York, and Puerto Rico. Over 30 percent were in New York alone. Puerto Rico followed with 14 percent of all USFMGs (table V-8).

The contribution of USFMGs to the total supply of active MDs in these areas varies. Although USFMGs accounted for only 1 percent of the supply of professionally active MDs in California, they comprised 7 percent of the active MD supply in both New Jersey and New York and 38 percent of the active supply in Puerto Rico (table V-9). Additionally, despite the fact that comparatively small proportions (less than 5 percent) of the total active supply of USFMGs were located in Rhode Island and Connecticut, those numbers were disproportionately high in comparison with the representation of USFMGs among the total supply of MDs. U.S. citizen foreign medical graduates accounted for 6 percent of the total active supply of MDs in Rhode Island and 4 percent of the active supply in Connecticut.

In general, there was little variation in the location patterns of USFMGs engaged in patient care activities whether they were hospital or office-based (table V-10). An exception to this pattern is notable for those MDs practicing in Puerto Rico. Nearly one-fourth (24 percent) of USFMGs who were hospital staff physicians were practicing in Puerto Rico in 1979. In contrast, only 8 percent of USFMGs in training programs were located there. The proportion of office-based USFMGs practicing in Puerto Rico was 15 percent, or about half way between the proportion of residents and the

Table V-8. Percent Distribution of Professionally Active MDs by State of Practice According to Country of Medical Education, 1979

	Total	USMGs	CMGs	USFMGs	Alien FMGs
Total	100.0	100.0	100.0	100.0	100.0
Alabama	1.2	1.4	0.8	0.2	0.5
Alaska	0.1	0.2	0.1	0.0	0.0
Arizona	1.2	1.3	1.9	1.1	0.7
Arkansas	0.7	0.8	0.1	0.1	0.2
California	12.8	14.2	21.2	6.9	7.1
Colorado	1.4	1.7	0.8	0.4	0.3
Connecticut	1.8	1.8	2.6	3.5	1.7
Delaware	0.2	0.2	0.3	0.2	0.4
Florida	4.1	3.7	3.2	4.4	5.8
Georgia	1.9	2.1	0.7	0.8	1.2
Hawaii	0.5	0.5	0.8	0.3	2.0
Idaho	0.2	0.3	0.3	0.0	0.0
Illinois	5.0	4.1	2.5	2.3	9.3
Indiana	1.7	1.8	0.9	0.3	1.3
Iowa	0.9	1.0	0.6	0.2	0.6
Kansas	0.9	0.9	0.4	0.3	0.8
Kentucky	1.2	1.3	0.4	0.2	0.8
Louisiana	1.5	1.7	0.7	0.4	0.7
Maine	0.4	0.4	1.9	0.4	0.3
Maryland	2.9	2.7	1.8	1.6	4.0
Massachusetts	3.6	3.8	6.0	1.9	2.7
Michigan	3.4	3.1	5.0	1.2	5.2
Minnesota	1.9	2.1	2.8	0.1	0.9
Mississippi	0.7	0.7	0.3	0.2	0.2
Missouri	1.9	1.9	0.8	0.5	1.9
Montana	0.3	0.3	0.2	0.1	0.1
Nebraska	0.6	0.7	0.1	0.0	0.2
Nevada	0.2	0.3	0.7	0.2	0.1
New Hampshire	0.4	0.4	1.4	0.3	0.3
New Jersey	3.2	2.4	1.8	10.5	6.0
New Mexico	0.5	0.5	0.5	0.2	0.2
New York	11.0	8.5	12.0	31.7	19.2
North Carolina	2.1	2.5	1.4	0.3	0.9
North Dakota	0.2	0.2	0.9	0.0	0.2
Ohio	4.1	3.8	3.3	2.8	6.0
Oklahoma	0.9	1.1	0.3	0.2	0.4
Oregon	1.1	1.3	1.7	0.2	0.3
Pennsylvania	5.3	5.4	3.3	4.3	5.0
Rhode Island	0.5	0.4	0.6	1.2	0.6
South Carolina	1.0	1.2	0.4	0.2	0.4
South Dakota	0.2	0.2	0.1	0.1	0.1
Tennessee	1.7	2.0	0.7	0.5	0.8
Texas	5.2	5.5	6.0	2.9	4.3
Utah	0.6	0.7	0.4	0.1	0.1
Vermont	0.3	0.3	0.6	0.1	0.1
Virginia	2.3	2.3	1.4	0.7	2.2
Washington	1.8	2.1	3.3	0.3	0.7
West Virginia	0.6	0.5	0.2	0.3	1.1
Wisconsin	1.8	1.9	1.0	0.4	1.4
Wyoming	0.1	0.2	0.0	0.1	0.0
District of Columbia	0.9	1.0	0.6	0.3	0.9
Puerto Rico	0.8	0.5	0.1	14.0	0.9
Other	0.3	0.3	0.1	0.5	0.3

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

Table V-9. Distribution of Professionally Active MDs by State of Practice According to Country of Medical Education, 1979

	Total	USMGs	CMGs	USFMGs	Alien FMGs	Percent USFMGs of total	Percent Alien FMGs of total	Percent USFMG of FMG total
Total	393,729	307,359	5,971	9,037	71,362	2.3	18.1	11.2
Alabama	4,588	4,157	45	22	364	0.5	7.9	5.7
Alaska	535	506	4	3	22	0.6	4.1	12.0
Arizona	4,643	3,966	115	96	466	2.1	10.0	17.1
Arkansas	2,612	2,489	6	7	110	0.3	4.2	6.0
California	50,458	43,487	1,264	626	5,081	1.2	10.1	11.0
Colorado	5,583	5,267	50	33	233	0.6	4.2	12.4
Connecticut	7,229	5,539	154	320	1,216	4.4	16.8	20.8
Delaware	907	577	16	19	295	2.1	32.5	6.1
Florida	16,277	11,518	189	400	4,170	2.5	25.6	8.8
Georgia	7,419	6,419	43	68	889	0.9	12.0	7.1
Hawaii	1,918	1,566	50	28	274	1.5	14.3	9.3
Idaho	970	936	15	4	15	0.2	1.5	21.1
Illinois	19,490	12,487	152	208	6,643	1.1	34.1	3.0
Indiana	6,572	5,593	56	29	894	0.4	13.6	3.1
Iowa	3,500	2,979	37	22	462	0.6	13.2	4.5
Kansas	3,477	2,895	23	23	536	0.7	15.4	4.1
Kentucky	4,571	3,926	25	14	606	0.3	13.3	2.3
Louisiana	5,820	5,215	41	38	526	0.7	9.0	6.7
Maine	1,575	1,243	112	34	186	2.2	11.8	15.5
Maryland	11,490	8,363	108	147	2,872	1.3	25.0	4.9
Massachusetts	14,225	11,759	356	169	1,941	1.2	13.6	8.0
Michigan	13,562	9,449	301	107	3,705	0.8	27.3	2.8
Minnesota	7,345	6,536	167	12	630	0.2	8.6	1.9
Mississippi	2,622	2,438	20	14	150	0.5	5.7	8.5
Missouri	7,310	5,850	48	44	1,368	0.6	18.7	3.1
Montana	1,018	957	14	6	41	0.6	4.0	12.8
Nebraska	2,248	2,078	5	4	162	0.2	7.2	2.4
Nevada	962	813	39	14	96	1.5	10.0	12.7
New Hampshire	1,394	1,090	81	23	200	1.6	14.3	10.3
New Jersey	12,777	7,421	109	946	4,301	7.4	33.7	18.0
New Mexico	1,876	1,650	28	21	177	1.1	9.4	10.6
New York	43,333	26,049	717	2,865	13,702	6.6	31.6	17.3
North Carolina	8,323	7,570	86	31	636	0.4	7.6	4.6
North Dakota	809	613	52	1	143	0.1	17.7	0.7
Ohio	16,301	11,586	195	255	4,265	1.6	26.2	5.6
Oklahoma	3,685	3,328	20	17	320	0.5	8.7	5.0
Oregon	4,330	3,997	102	21	210	0.5	4.8	9.1
Pennsylvania	20,740	16,608	194	386	3,552	1.9	17.1	9.8
Rhode Island	1,876	1,317	38	108	413	5.8	22.0	20.7
South Carolina	3,887	3,567	21	15	284	0.4	7.3	5.0
South Dakota	745	651	7	7	80	0.9	10.7	8.0
Tennessee	6,707	6,041	43	46	577	0.7	8.6	7.4
Texas	20,665	16,943	361	261	3,100	1.3	15.0	7.8
Utah	2,216	2,124	25	5	62	0.2	2.8	7.5
Vermont	1,011	902	36	11	62	1.1	6.1	15.1
Virginia	8,901	7,199	81	66	1,555	0.7	17.5	4.1
Washington	7,083	6,349	194	30	510	0.4	7.2	5.6
West Virginia	2,447	1,640	14	25	768	1.0	31.4	3.2
Wisconsin	6,923	5,856	57	37	973	0.5	14.1	3.7
Wyoming	502	463	3	10	26	2.0	5.2	27.8
District of Columbia	3,699	3,010	33	29	627	0.8	17.0	4.4
Puerto Rico	3,333	1,449	7	1,267	610	38.0	18.3	67.5
Other	1,166	875	8	41	242	3.5	20.8	14.5

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

Table V-10. Percent Distribution of USFMGs in Patient Care Activities by State of Practice, 1979

	Hospital-based		Office-based
	Residents	Staff	
Total	100.0	100.0	100.0
Alabama	0.6	0.2	0.2
Alaska	-	-	0.1
Arizona	0.4	0.9	1.4
Arkansas	0.0	0.3	0.1
California	6.6	4.9	7.4
Colorado	0.4	0.3	0.4
Connecticut	3.5	4.6	3.4
Delaware	0.2	0.2	0.3
District of Columbia	0.4	0.3	0.2
Florida	3.1	3.6	5.0
Georgia	0.6	0.5	0.9
Hawaii	0.2	0.3	0.4
Idaho	-	0.1	0.1
Illinois	3.8	1.3	1.9
Indiana	0.3	0.2	0.3
Iowa	0.1	0.3	0.3
Kansas	0.4	0.3	0.2
Kentucky	0.2	0.2	0.1
Louisiana	1.0	0.5	0.1
Maine	0.2	0.3	0.5
Maryland	2.5	2.0	1.1
Massachusetts	2.6	1.6	1.5
Michigan	2.1	1.0	0.9
Minnesota	0.2	0.1	0.1
Mississippi	0.1	-	0.2
Missouri	0.6	0.3	0.5
Montana	-	0.3	0.1
Nebraska	0.0	0.1	0.0
Nevada	-	0.4	0.1
New Hampshire	-	0.1	0.4
New Jersey	12.1	8.1	10.8
New Mexico	0.0	0.2	0.3
New York	34.2	25.5	31.6
North Carolina	0.2	0.5	0.4
North Dakota	-	-	0.0
Ohio	3.6	2.3	2.8
Oklahoma	0.4	0.2	0.1
Oregon	0.3	0.3	0.2
Pennsylvania	5.2	4.5	4.1
Rhode Island	0.9	1.0	1.4
South Carolina	0.2	0.3	0.1
South Dakota	0.1	0.2	0.1
Tennessee	0.7	0.9	0.4
Texas	3.1	2.7	2.9
Utah	0.1	-	0.1
Vermont	0.0	0.1	0.2
Virginia	0.6	1.0	0.7
Washington	0.3	0.3	0.4
West Virginia	0.4	0.2	0.3
Wisconsin	0.4	0.7	0.4
Wyoming	0.0	0.1	0.1
Puerto Rico	7.5	23.7	14.6
Other	0.1	2.3	0.2

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

proportion of hospital staff physicians. The dearth in the proportion of residents located in Puerto Rico (in comparison to hospital staff and office-based physicians) is largely compensated by the higher proportions of residents than the other groups locating in New York, New Jersey, and Illinois.

Although only 8 percent of USFMG residents were located in Puerto Rico in 1979, these MDs represented 34 percent of all MDs in training programs there (table V-11). The current impact of USFMGs on the physician supply of Puerto Rico is further illustrated by the fact that 42 percent of all office-based MDs in the area in 1979 were USFMGs (table V-12).

The location patterns of USFMGs are similar to those of their foreign citizen FMG counterparts in that large proportions of both groups are located in New York and New Jersey. USFMGs, however, are much more likely (than alien FMGs) to locate in these two States. On the other hand, comparatively large percentages of alien FMGs are found in several other States (e.g., Illinois, Michigan, and Ohio) where the proportions of USFMGs are relatively low.

Discussion

Currently, a little more than 1 in 10 FMGs practicing medicine in this country are USFMGs. However, by the year 2000 the supply of USFMGs is expected to more than double; and with the slowdown in the growth of alien FMGs, nearly 1 in 5 FMGs is expected to be a U.S. citizen.

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Table V-11. Distribution of Hospital-based Practice MDs by State Of Practice According to Country of Medical Education, 1979

	Residents							Staff						
	Total	USMGs	CMGs	USFMGs	Alien FMGs	Percent USFMGs of total	Percent Alien FMGs of total	Total	USMGs	CMGs	USFMGs	FMGs	Percent USFMGs of total	Percent Alien FMGs of total
Total	64,294	50,844	364	1,995	11,091	3.1	17.3	42,904	26,461	486	1,174	14,783	2.7	34.5
Alabama	754	685	3	11	55	1.5	7.3	334	248	1	2	83	0.6	24.9
Alaska	6	6	-	-	-	-	-	116	111	1	-	4	-	3.4
Arizona	750	692	5	7	46	0.9	6.1	500	395	6	10	89	2.0	17.8
Arkansas	366	355	-	1	10	0.3	2.7	204	173	-	3	28	1.5	13.7
California	6,383	5,821	60	132	370	2.1	5.8	4,387	3,443	81	58	805	1.3	18.3
Colorado	995	947	4	7	37	3.7	3.7	522	459	6	3	54	0.6	10.3
Connecticut	1,286	980	2	70	234	5.4	18.2	876	560	17	54	245	6.2	28.0
Delaware	107	69	-	3	35	2.8	32.7	121	41	3	2	75	1.7	62.0
Florida	1,753	1,379	12	62	300	3.5	17.1	1,644	835	12	42	755	2.6	45.9
Georgia	1,117	1,023	3	12	79	1.1	7.1	741	507	2	6	226	0.8	30.5
Hawaii	341	314	1	4	22	1.2	6.5	188	132	2	4	50	2.1	26.6
Idaho	23	23	-	-	-	-	-	80	75	1	1	3	1.3	3.8
Illinois	3,350	2,293	3	75	979	2.2	29.2	2,343	1,045	22	15	1,261	0.6	53.8
Indiana	899	857	3	6	33	0.7	3.7	455	287	5	2	161	0.4	35.4
Iowa	618	565	1	2	50	0.3	8.1	196	114	2	3	97	1.5	39.3
Kansas	594	517	2	8	67	1.3	11.3	348	198	5	3	142	0.9	40.8
Kentucky	705	628	1	3	73	0.4	10.4	387	234	-	2	151	0.5	39.0
Louisiana	780	676	5	20	79	2.6	10.1	677	514	1	6	156	0.9	23.0
Maine	131	125	1	3	2	2.3	1.5	194	148	7	3	36	1.5	18.6
Maryland	2,246	1,624	14	49	559	2.2	24.9	1,680	1,098	13	24	545	1.4	32.4
Massachusetts	2,916	2,492	54	52	318	1.8	10.9	1,648	1,153	37	19	439	1.2	26.6
Michigan	2,936	2,092	23	41	780	1.4	26.6	1,232	620	24	12	576	1.0	46.8
Minnesota	1,678	1,587	16	3	72	0.2	4.3	485	376	11	1	77	0.2	20.0
Mississippi	344	326	1	2	15	0.6	4.4	269	233	2	-	34	-	12.6
Missouri	1,327	1,123	1	11	192	0.8	14.5	737	410	1	3	323	0.4	43.8
Montana	12	11	-	-	1	-	8.3	89	75	-	3	11	3.4	12.4
Nebraska	408	377	-	1	30	0.2	7.4	157	123	-	1	33	0.6	21.0
Nevada	15	13	-	-	2	-	13.3	88	57	3	5	23	5.7	26.2
New Hampshire	154	150	2	-	2	-	1.3	116	73	5	1	37	0.9	31.9
New Jersey	1,785	581	3	242	959	13.6	53.7	1,744	611	5	95	1,033	5.4	59.2
New Mexico	257	244	1	1	11	0.4	4.3	234	195	3	2	34	0.9	14.5
New York	9,070	5,109	36	683	3,242	7.5	35.7	6,050	2,496	74	299	3,181	4.9	52.6
North Carolina	1,148	1,090	7	4	47	0.3	4.1	889	702	11	6	170	0.7	19.1
North Dakota	68	63	-	-	5	-	7.4	73	49	2	-	22	-	30.1
Ohio	2,547	1,865	27	71	584	2.8	22.9	1,997	1,082	20	27	868	1.4	43.5
Oklahoma	577	516	1	8	52	1.4	9.0	323	241	1	2	79	0.6	24.5
Oregon	525	503	5	5	12	1.0	2.3	288	231	9	4	44	1.4	15.3
Pennsylvania	3,781	2,936	19	104	722	2.8	19.1	2,337	1,534	18	53	732	2.3	31.3
Rhode Island	337	288	-	17	32	5.0	9.5	240	118	5	12	105	5.0	43.8
South Carolina	684	642	5	3	34	0.4	5.0	426	310	-	4	112	0.9	26.3
South Dakota	71	65	-	2	4	2.8	5.6	94	71	1	2	20	2.1	21.3
Tennessee	1,253	1,137	3	14	99	1.1	7.9	555	417	4	10	124	1.8	22.3
Texas	3,425	3,075	13	61	276	1.8	8.1	1,941	1,399	22	32	488	1.6	25.1
Utah	406	397	1	2	6	0.5	1.5	133	116	2	-	15	-	11.3
Vermont	192	177	6	1	8	0.5	4.2	81	65	3	1	12	1.2	14.8
Virginia	1,474	1,303	5	12	154	0.8	10.4	1,025	675	9	12	329	1.2	32.1
Washington	914	879	7	5	23	0.5	2.5	628	544	9	3	72	0.5	11.5
West Virginia	329	261	-	8	60	2.4	18.2	344	155	2	2	185	0.6	53.8
Wisconsin	1,115	1,011	5	8	91	0.7	8.2	522	365	3	8	146	1.5	28.0
Wyoming	22	20	-	1	1	4.5	4.5	71	65	-	1	5	1.4	7.0
District of Columbia	783	634	1	7	141	0.9	18.0	465	320	4	4	137	0.9	29.5
Puerto Rico	444	226	-	149	69	33.6	15.5	766	301	3	278	184	36.3	24.0
Other	90	69	2	2	17	18.9	18.9	813	625	3	27	158	3.3	19.4

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

Table V-12. Distribution of Office-based Practice MDs by State of Practice According to Country of Medical Education, 1979

	Total	USMGs	CMGs	USFMGs	Alien FMGs	Percent USFMGs of total	Percent Alien FMGs of total
Total	249,585	201,533	4,348	5,344	38,360	2.1	15.4
Alabama	3,167	2,947	35	9	176	0.3	5.6
Alaska	377	356	3	3	15	0.8	4.0
Arizona	3,047	2,580	98	73	296	2.4	9.7
Arkansas	1,868	1,800	6	3	59	0.2	3.2
California	35,039	30,331	1,013	394	3,301	1.1	9.4
Colorado	3,511	3,359	31	22	99	0.6	2.8
Connecticut	4,252	3,363	119	184	586	4.3	13.8
Delaware	622	427	11	14	170	2.3	27.3
District of Columbia	1,720	1,449	19	11	241	0.6	14.0
Florida	11,747	8,530	137	269	2,811	2.3	23.9
Georgia	4,973	4,399	27	46	501	0.9	10.1
Hawaii	1,232	999	38	18	177	1.5	14.4
Idaho	827	800	14	3	10	0.4	1.2
Illinois	12,089	8,028	89	100	3,872	0.8	32.0
Indiana	4,786	4,083	42	18	643	0.4	13.4
Iowa	2,372	2,046	26	17	283	0.7	11.9
Kansas	2,269	1,971	12	10	276	0.4	12.2
Kentucky	3,148	2,807	22	8	311	0.3	9.9
Louisiana	3,890	3,660	28	6	196	0.2	5.0
Maine	1,159	896	100	26	137	2.2	11.8
Maryland	5,487	3,973	50	60	1,404	1.1	25.6
Massachusetts	7,709	6,575	194	81	859	1.1	11.1
Michigan	8,337	6,021	220	48	2,048	0.6	24.6
Minnesota	4,516	4,015	119	6	376	0.1	8.3
Mississippi	1,881	1,770	14	11	86	0.6	4.6
Missouri	4,474	3,721	35	26	692	0.6	15.5
Montana	873	835	14	3	21	0.3	2.4
Nebraska	1,492	1,406	5	2	79	0.1	5.3
Nevada	792	686	34	8	64	1.0	8.1
New Hampshire	1,012	770	71	22	149	2.2	14.7
New Jersey	8,208	5,593	79	575	1961	7.0	23.9
New Mexico	1,203	1,048	24	17	114	1.4	9.5
New York	23,367	15,304	501	1,687	5,875	7.2	25.1
North Carolina	5,414	5,020	54	20	320	0.4	5.9
North Dakota	626	468	49	1	108	0.2	17.3
Ohio	10,479	7,693	122	147	2,517	1.4	24.0
Oklahoma	2,553	2,377	12	7	157	0.3	6.1
Oregon	3,184	2,973	75	11	125	0.3	3.9
Pennsylvania	12,684	10,625	115	217	1,727	1.7	13.6
Rhode Island	1,141	799	30	76	236	6.7	20.7
South Carolina	2,479	2,349	9	7	114	0.3	4.6
South Dakota	538	477	5	3	53	0.6	9.9
Tennessee	4,350	4,031	25	22	272	0.5	6.3
Texas	13,326	10,880	305	154	1,987	1.2	14.9
Utah	1,482	1,433	19	3	27	0.2	1.8
Vermont	634	564	27	9	34	1.4	5.4
Virginia	5,595	4,580	55	35	925	0.6	16.5
Washington	4,883	4,365	156	19	343	0.4	7.0
West Virginia	1,592	1,085	11	14	482	0.9	30.3
Wisconsin	4,761	4,047	40	20	654	0.4	13.7
Wyoming	387	357	3	8	19	2.1	4.9
Puerto Rico	1,871	772	4	781	314	41.7	16.8
Other	157	89	2	10	56	6.4	35.7

SOURCE: Compiled by the Division of Health Professions Analysis, Bureau of Health Professions, from unpublished data from the American Medical Association.

Since the specialty, practice activity, and location choices of USFMGs differ somewhat from those of alien FMGs, this expected shift in the mix of FMGs may result in some changes in overall FMG practice patterns. For example, if the present specialty preferences of U.S. citizen foreign medical graduates were to remain unchanged, their increasing influence could result in a shift in overall FMG specialty choices towards general/family practice and the surgical specialties, and away from the non-medical, non-surgical specialties such as anesthesiology and pathology. Additionally, as a result of the impact of USFMG practice patterns, FMGs in general would be found less frequently in hospital staff positions and more frequently in office-based practice.

It is difficult to predict whether USFMGs will maintain their current practice profile as their numbers and representation increase. In any case, alien FMGs, by virtue of their numbers, are expected to remain the dominant influence on overall FMG practice patterns as described earlier in this report.

Chapter VI

Supply Forecasts for Foreign-Trained Physicians

Introduction

The analysis in chapter two detailed the role of legislation in influencing the flow of foreign-trained physicians into the United States. While P.L. 94-484 imposed many restraints and conditions on FMG immigration, growth continued in the two legislatively exempt FMG categories (U.S. citizen foreign medical graduates and alien physicians with family preference visas). Therefore, consideration and analysis of factors relating to these components, in addition to the influence of the most recent legislation, are required in order to attempt to make reasonable projections of possible future FMG supply.

In the projections presented here, annual additions to FMG supply from all FMG categories except temporary visitors (J-visas and H-visas) are assumed to be derived from the future number of passers of practice qualifying examinations. Alternative estimates are provided in order to indicate a range of likelihood. Further, since the medical credentials of Canadian-trained physicians are considered equal to their U.S. trained counterparts, they are exempt from taking the qualifying examinations and are not addressed here.

The major difference in the alternative estimates of future FMG supply presented here lies between the basic and high estimates and is the result of differences in assumptions regarding the future participation of USFMGs and family preference visa alien physicians in the U.S. medical care system. Little difference exists between the basic and low alternatives because legislation has established narrow limits within which new additions of occupational and non-preference immigrant physicians can vary. Only an assumption of substantial change in the VQE pass rate (inferred to the new July, 1984 exam) and other entry requirements would create wide variation in estimates of these new additions. No such assumption is made here because trend analysis indicates little historical change in VQE performance. Similarly, recent historical data indicate a severe curtailment in the number of new entrant exchange visitors. Despite recent extensions in their length of stay in the U.S., alternative estimates of future exchange visitor additions indicate a continuation of this trend, do not vary widely, and are the major contributor to the difference between the low and basic alternatives.

Forecasts of Total Supply of FMGs

Based on assumptions of the most likely circumstances which can be expected to influence future new entries, the supply of foreign-trained physicians (excluding Canadian-trained) is projected to increase about 35 percent over the next two decades--from 98,700 in 1981 to 133,000 in 2000. Almost half of this growth is expected to occur by the late 1980s in large part as a result of the return of a significant percentage of the current pool of U.S. citizens studying medicine abroad. This set of projections assumes that subsequent to 1985 the effects of the implementation of a comprehensive qualifying examination for all FMGs will be evident in a reduced number of USFMGs and family preference visa physicians.

Alternatively, more liberal assumptions regarding future additions of USFMGs and family preference visa alien physicians result in a higher projected increase of 61 percent in the foreign-trained physician supply between 1981 and 2000, from 98,700 to 159,000 (table VI-1).

Assumptions Relating to FMG Supply Projections

1) The number of permanent immigrants other than family preference will average slightly more than 1,600 throughout the projection period based on the Educational Commission for Foreign Medical Graduates' estimate of the number passing the VQE during the early 1980s.

2) Future entries to the U.S. medical care system from the stock of alien physicians who entered this country under family preference visas will run between 900 and 1,100 annually. These estimates are derived from Immigration and Naturalization Service (INS) data on the annual number of physicians entering the U.S. under this classification and the assumption that 68 percent will eventually pass the current qualifying examination.[1] The lower estimates of the range are expected to prevail during the latter half of the

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[1] Data from the ECFMG indicate that the cumulative proportion of FMGs passing the ECFMG examination after up to eight or more attempts is 68 percent.

Table VI-1. Estimates of the Supply of Active Foreign-Trained Physicians for 1981, and Projections of the Supply of Active Foreign-Trained Physicians, Using Basic and Alternative Assumptions, 1985-2000

	1981	1985	1990	1995	2000
	Number of Active Foreign-Trained Physicians[1]				
Basic Series	98,700	111,900	120,500	128,100	133,000
Alternatives:					
Low	98,700	111,600	120,300	127,900	132,900
High	98,700	113,900	130,800	146,300	159,000
	Rate per 100,000 Population				
Basic Series	42.0	46.9	48.3	49.3	49.6
Alternatives:					
Low	42.0	46.8	48.2	49.3	49.6
High	42.0	47.7	52.4	56.3	59.3

1/ Includes U.S. citizen FMGs and excludes Canadian-trained MDs.

Population base: U.S. Bureau of the Census. Current Population Reports Series P-25, No. 900, No. 922 (Middle Series) and unpublished data.

1980s and the remainder of the projection period, reflecting the effects of the implementation of a stricter qualifying examination beginning in the latter half of the 1980s (table VI-2).[2] Alternatively, an estimate of slightly under 1,600 annually results from the more liberal assumptions that all physicians estimated to enter the U.S. by way of family preference visas will become a part of the active physician supply and that their numbers will not decrease in the future (table VI-3).

3) U.S. citizen-FMG new entries are expected to average about 1,500 annually during the first half of the 1980s based on ECFMG estimates of the number expected to pass the qualifying examination during the early 1980s. This number is expected to decline during the second half of the decade and level off at about one-third of the annual number expected during the first half. This decline is expected to result from the acceptance and implementation of some of the recommendations from the Government Accounting Office (GAO) as a result of its study of U.S. citizens studying medicine abroad. GAO recommended that the Congress direct the Secretary of Health and Human Services to work with representatives of the medical professions and State licensing authorities with the objective of developing and implementing mechanisms to ensure that all students who attend foreign medical schools demonstrate that their medical knowledge and skills are comparable to those of their U.S.-trained counterparts before they are allowed to enter the U.S. health care delivery system either for training or independent practice.

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[2] One of the GAO recommendations was implementing one qualifying examination for all FMGs to eliminate the alleged two-class screening system that now exists. The assumption here is that performance on such an examination, at least initially, would be poorer than it currently is on the ECFMG exam.

Table VI-2. Estimated Annual Additions to the Supply of Foreign Medical Graduates Basic Forecast, 1982-2000

		Foreign Citizen FMG's						
		Permanent		Temporary				
	Total New Entries	Occup.-Pref. Non-Preference	Family Preference	Exchange Visitors (J-visa)	Distinguished Visitors (H-visa)	U.S. Citizen FMG's	Losses (J-visa Emigrants, Deaths and Retirements)	Net FMG Additions to Supply
1982	4,960	1,644	1,066	558	180	1,512	1,678	3,282
1983	5,704	1,644	1,066	1,302	180	1,512	2,224	3,480
1984	4,694	1,644	1,066	292	180	1,512	1,566	3,128
1985	5,438	1,644	1,066	1,036	180	1,512	2,122	3,316
1986	3,074	1,644	880	26	180	344	1,467	1,607
1987	3,971	1,644	981	700	180	396	2,031	1,940
1988	3,328	1,644	1,056	-	180	448	1,552	1,776
1989	3,495	1,644	907	264	180	500	1,801	1,694
1990	3,281	1,644	907	-	180	550	1,685	1,596
1991	3,281	1,644	907	-	180	550	1,584	1,697
1992	3,281	1,644	907	-	180	550	1,664	1,617
1993	3,281	1,644	907	-	180	550	1,752	1,529
1994	3,281	1,644	907	-	180	550	1,850	1,431
1995	3,281	1,644	907	-	180	550	1,952	1,329
1996	3,281	1,644	907	-	180	550	2,057	1,224
1997	3,281	1,644	907	-	180	550	2,177	1,104
1998	3,281	1,644	907	-	180	550	2,295	986
1999	3,281	1,644	907	-	180	550	2,418	863
2000	3,281	1,644	907	-	180	550	2,546	735

See text for assumptions and methodology used to derive these estimates.

Table VI-3. Estimated Annual Additions to the Supply of Foreign Medical Graduates, High Alternative, 1982-2000

	Total New Entries	Foreign Citizen FMG's				U.S. Citizen FMG's	Losses (J-visa Emigrants, Deaths and Retirements)	Net FMG Additions to Supply
		Permanent		Temporary				
		Occup. Pref. Non-Preference	Family Preference	Exchange Visitors (J-visa)	Distinguished Visitors (H-visa)			
1982	5,462	1,644	1,568	558	180	1,512	1,679	3,783
1983	6,206	1,644	1,568	1,302	180	1,512	2,226	3,980
1984	5,196	1,644	1,568	292	180	1,512	1,570	3,626
1985	5,940	1,644	1,568	1,036	180	1,512	2,127	3,813
1986	4,930	1,644	1,568	26	180	1,512	1,476	3,454
1987	5,674	1,644	1,568	770	180	1,512	2,044	3,630
1988	4,904	1,644	1,568	-	180	1,512	1,570	3,334
1989	5,168	1,644	1,568	264	180	1,512	1,822	3,346
1990	5,168	1,644	1,568	264	180	1,512	1,976	3,192
1991	5,168	1,644	1,568	264	180	1,512	1,879	3,289
1992	5,168	1,644	1,568	264	180	1,512	1,964	3,204
1993	5,168	1,644	1,568	264	180	1,512	2,057	3,111
1994	5,168	1,644	1,568	264	180	1,512	2,164	3,004
1995	5,168	1,644	1,568	264	180	1,512	2,273	2,895
1996	5,168	1,644	1,568	264	180	1,512	2,387	2,781
1997	5,168	1,644	1,568	264	180	1,512	2,514	2,654
1998	5,168	1,644	1,568	264	180	1,512	2,644	2,524
1999	5,168	1,644	1,568	264	180	1,512	2,778	2,390
2000	5,168	1,644	1,568	264	180	1,512	2,916	2,252

See text for assumptions and methodology used to derive these estimates.

The GAO also recommended approaches to accomplishing this objective. They include establishing:

a) A better examination to test students before permitting them to enter graduate medical education or be licensed in the U.S.--any such test being more stringent than the ECFMG exam, which USFMGs are now required to pass; and

b) An accrediting body to develop standards for foreign medical schools and only students from such accredited schools would be permitted to receive undergraduate clinical training, graduate medical education, or be licensed in the U.S.

The former recommendation has been scheduled for implementation in July, 1984. The latter, if established, would probably serve to further reduce the number of USFMGs who enter the system annually.

4) The number of exchange visitor new entrants dropped precipitously after the passage of P.L. 94-484. A phaseout of the number of new entrant exchange visitors is expected by 1990 based upon an assumption of the continuation of this trend. A more liberal assumption that the exchange visitor program will be maintained through the decade of the 1990s, a reflection of the provisions of the most recent legislation (P.L. 97-116), results in a new entrant exchange visitor estimate of 264 for the latter decade of the projection period. Both assumptions, however, result in comparable total active supply estimates in year 2000.

Based upon recent historical information, it is assumed that slightly less than one-third of exchange visitors will adjust their status to family preference permanent immigrant as a consequence of marriage and therefore will not emigrate after completion of training. The annual number of J-visa entries is derived from estimates of the number of residency slots available to them, which are determined from the estimated proportion of such slots located in hospitals in underserved areas and are therefore allowed to maintain higher proportions of exchange visitor positions than are hospitals in nonunderserved areas. Alternative basic and low estimates of annual J-visa new entrants average about 120 fewer than estimates derived from the previously described assumption (table VI-4).

5) H-visa alien entries are restricted to those physicians of distinguished merit and ability. The most recent estimate from the Immigration and Naturalization Service on the number of physicians entering the U.S. in this category (180) is assumed to remain constant over the projection period.

Projected total annual FMG new additions are a combination of the estimates for all categories of foreign-trained physicians for which assumptions have been discussed as tables VI-2, 3, and 4 show. In the more conservative series of forecasts, FMG additions to active supply (net of J-visa emigrants, deaths, and retirements) decline from levels of 3,000 to 3,500 during the early 1980s to less than 1,000 by the late 1990s. In the highest series of forecasts, net FMG additions decline from a level of 3,500 to 4,000 in the early 1980s to about 2,000 by the late 1990s.

Table VI-4. Estimated Annual Additions to the Supply of Foreign Medical Graduates, Low Alternative, 1982-2000

		Foreign Citizen FMG's						
		Permanent		Temporary				
	Total New Entries	Occup. Pref. Non-Preference	Family Preference	Exchange Visitors (J-visa)	Distinguished Visitors (H-visa)	U.S. Citizen FMG's	Losses (J-visa Emigrants, Deaths and Retirements)	Net FMG Additions to Supply
1982	4,797	1,644	1,066	395	180	1,512	1,679	3,118
1983	5,581	1,644	1,066	1,179	180	1,512	2,190	3,391
1984	4,572	1,644	1,066	170	180	1,512	1,457	3,115
1985	5,356	1,644	1,066	954	180	1,512	2,035	3,321
1986	3,048	1,644	880	-	180	344	1,421	1,627
1987	3,875	1,644	981	674	180	396	1,937	1,938
1988	3,328	1,644	1,056	-	180	448	1,524	1,804
1989	3,455	1,644	907	224	180	500	1,743	1,712
1990	3,281	1,644	907	-	180	550	1,657	1,624
1991	3,281	1,644	907	-	180	550	1,583	1,698
1992	3,281	1,644	907	-	180	550	1,664	1,617
1993	3,281	1,644	907	-	180	550	1,751	1,530
1994	3,281	1,644	907	-	180	550	1,849	1,432
1995	3,281	1,644	907	-	180	550	1,951	1,330
1996	3,281	1,644	907	-	180	550	2,056	1,225
1997	3,281	1,644	907	-	180	550	2,175	1,106
1998	3,281	1,644	907	-	180	550	2,294	987
1999	3,281	1,644	907	-	180	550	2,416	865
2000	3,281	1,644	907	-	180	550	2,545	736

See text for assumptions and methodology used to derive these estimates.

Regardless of the alternative chosen, graduates of foreign medical schools can be expected to make up a significant proportion of the total supply of active physicians even by the year 2000. Currently, FMGs represent an estimated 21 percent of the total active supply of physicians. Even under the most conservative alternatives presented here, they are not expected to drop below 17 percent of total supply in the year 2000.

Forecasts of the Specialty Distribution of Foreign-Trained Physicians

Two different forecasts of the specialty distribution of practicing FMGs are given. Historically, FMG specialty distributions have been different from those of their U.S. trained counterparts.

A major determinant of a physician's specialty of practice is the training that he or she has received. However, certain factors should be considered in the interpretation of the data reported by physicians in training and by the training programs. Even if a physician has decided to practice in a narrowly defined specialty, such as an internal medicine or pediatric subspecialty, the physician still must complete initial years of training in general internal medicine or general pediatrics, respectively. Thus, it is difficult to draw conclusions about the eventual supply of general or primary care physicians from the training data. Furthermore, some physicians change their specialties later in their careers. The historical data indicate certain trends in post-GME choices; one of the most common is to switch from primary care to subspecialty practice.[3] Consequently, projections have been made with and without such shifts taken into account in order to provide a range of estimates of the FMG specialty distribution. These forecasts include physicians in residency training with their specialties in any given year determined by the program in which they are participating and their year since graduation.

Data were available to estimate differences in future first-year residency choices between USMGs and FMGs.[4] An analysis of the historical pattern of specialty shifts both during and after GME was available to forecast these future shifts, for USMGs only.[5] Trends in specialty shifts which have been

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3/ Holden, W.D., and Levit, E.J. "The Migration of Physicians from One Specialty to Another: A Longitudinal Study of U.S. Medical School Graduates." Journal of the American Medical Association, 239:205-9, 1978.

4/ These projections of the supply of primary medical care specialists and of the "all other" aggregate specialty supply were derived essentially by first assigning a first-year residency specialty distribution to each future graduating class based upon projections of historical first-year residency trends. These distributions were the same for U.S. and Canadian trained MDs but were different for FMGs.

5/ USMGs were tracked each year as a cohort through graduate medical education and up to their seventeenth year after graduation, with adjustments made for movements into and out of each specialty group. After their seventeenth year, their specialty was held constant until their separation from the work force. These adjustments were based upon available data, that is, on the behavior of prior graduating classes from U.S. schools only. Canadian specialty shifts were assumed to be similar to those of U.S. graduates. The adjustments were then further modified to reflect present and anticipated trends in GME. USMGs in each specialty were then added to the base year survivors in that specialty, after adjustment was made to the base year survivors for their own specialty shifts.

exhibited by USMGs are expected to continue. For FMGs,[6] two scenarios regarding specialty shifts have been presented. The first assumes that FMGs will behave as do USMGs. That is, even though they have a unique initial specialty distribution, FMGs will shift out of primary care at the same rate.[7] The second scenario assumes that no post-GME specialty shifts will occur.[8]

As stated earlier, the number of foreign-trained physicians (including residents) is projected to be about 133,000 by the year 2000. Since almost half of this growth is expected to occur by the late 1980s, FMG supply will

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[6] The projections of foreign-trained physician specialists were determined by adding the base year survivors in each specialty to the future FMG additions in that specialty. Unlike U.S./CMG first-year residency distributions, FMG first-year residency distributions were first adjusted for GME mobility.

[7] The first-year residency distribution for FMGs already accounts for the first four years of GME mobility. In order to further estimate the impact of mobility on FMG estimates, it was assumed that U.S./CMG and foreign-trained physician mobility behavior post-GME will be similar. That is, the acculturation of FMGs who have entered and have remained in practice for a number of years is likely to produce FMG subspecialization choices that mirror their U.S. and Canadian trained counterparts. The U.S./CMG projections, which include specialty shifts both during and after GME, were then combined with similar FMG specialty projections. Coupling these "with Post-GME specialty shifts" estimates results in a lower limit of the number of primary care MDs in 1990. (See "Includes FMG Post-GME Specialty Changes" column in table VI-5).

[8] FMGs have been viewed by some observers as more respondent to population demand than U.S. and Canadian-trained MDs. Thus, it is possible that those FMGs that have chosen primary care may remain in the primary care specialties in greater percentages than their U.S. trained counterparts. Coupling post-GME specialty changes estimates for U.S./CMGs with the "no post-GME specialty changes" estimates for FMGs results in an upper limit estimate of the number of primary care MDs in 1990. (See "No FMG Post-GME Specialty Changes" column in table VI-5).

Table VI-5. Distribution of Physicians (MDs and DOs) by Selected Specialty Groupings and Country of Medical Education 1981, and Projections to 1990 that Account for the Specialty Mobility of Physicians

Specialty	Estimated 1981 1/		Projected 1990 2/			
	Active Physicians		Includes FMG Post-GME Specialty Changes		No FMG Post-GME Specialty Changes	
	number	percent	number	percent	number	percent
Total Active Physicians	467,000	100.0	594,600	100.0	594,600	100.0
MD	449,000	96.1	566,800	95.3	566,800	95.3
U.S.-trained	343,300	73.5	439,300	73.9	439,300	73.9
Canadian-trained	7,000	1.5	7,000	1.2	7,000	1.2
Foreign-trained	98,700	21.1	120,500	20.3	120,500	20.3
DO	18,000	3.9	27,800	4.7	27,800	4.7
Primary Care Physicians	194,700	41.7	237,600	40.0	242,200	40.7
MD	178,500	39.8	212,600	37.5	217,200	38.3
U.S./Canadian Trained	143,300	40.9	175,400	39.3	175,300	39.3
Foreign Trained	35,200	35.7	36,800	30.5	41,900	34.8
General/Family Practice	65,200	14.5	72,200	12.7	73,500	13.0
U.S./Canadian Trained	54,100	15.4	62,900	14.1	62,800	14.1
Foreign Trained	11,100	11.2	9,300	7.7	10,700	8.9
Internal Medicine	81,200	18.1	91,500	16.1	95,000	16.8
U.S./Canadian Trained	65,100	18.6	76,300	17.1	76,300	17.1
Foreign Trained	16,100	16.3	15,200	12.6	18,700	15.5
Pediatrics	32,000	7.1	48,500	8.6	48,700	8.6
U.S./Canadian Trained	24,100	6.9	36,200	8.1	36,200	8.1
Foreign Trained	8,000	8.1	12,300	10.2	12,500	10.3
DO	16,200	90.0	25,000	90.0	25,000	90.0
Other Specialties	272,300	58.3	357,000	60.0	352,400	59.3
MD Only	270,500	60.2	354,200	62.5	349,600	61.7
U.S./Canadian Trained	207,000	59.1	270,900	60.7	271,000	60.7
Foreign Trained	63,500	64.3	83,700	69.5	78,600	65.2
DO	1,800	10.0	2,800	10.0	2,800	10.0

1/ Estimates of active MDs in 1981 were calculated by ODAM and include a redistribution of the majority of the "not classified" and "address unknown" physicians. DOs in the primary care specialties were estimated at 90 percent in 1981 and anticipated to remain the same to 1990.

2/ Estimates of foreign medical graduates entering first-year residencies in the primary care specialties and other selected specialties between 1981 and 1990 were adjusted to account for changes during graduate medical education.

Source: For U.S./Canadian-trained mobility estimates see: The Current and Future Supply of Physicians and Physician Specialists, DHHS Pub. No. (HRA) 80-60, September, 1980, Appendix VI.

reach a level of about 120,500 by 1990. Based upon the scenarios just described, approximately 36,800 to 41,900 or about 31 to 35 percent of these FMGs are expected to be practicing in one of the primary care specialties of general/family practice, general internal medicine, or general pediatrics.

More specifically, about 8 to 9 percent are expected to be practicing in general/family practice, 13 to 16 percent in general internal medicine and about 10 percent in general pediatrics. The vast majority of FMGs, about 65 to 70 percent, will be located in the medical, surgical, and other specialties.

These 1990 estimates differ somewhat from the specialty distribution of FMGs in 1981. These projections call for a 1 to 5 percentage point decline from the 36 percent 1981 level in those FMGs in the primary care specialties, with general/family practice sustaining a 2 to 3 percent decline, general internal medicine a 0 to 3 percent decline, but general pediatrics recording about a 2 percent increase.

In comparison to their U.S./Canadian-trained counterparts, FMGs are projected to select primary care specialties in lesser proportions. U.S./CMG and total MD primary care preferences are projected at nearly 40 percent by 1990. Although the general/family practice share of total supply will decline over the 10-year period, FMG declines will well outpace U.S./CMG drops. Declines in the percentages in general internal medicine will be slight for all MDs while offsetting increases are projected for general pediatrics for both groups.

Although the numbers of primary care physicians are expected to increase between 1981 and 1990 for both U.S./CMGs and FMGs, the percentage that primary care physicians represent of total physicians is projected to decrease slightly despite the increases in primary care participation in first-year residencies--reaching 40.7 percent of all active physicians in 1990 compared with 41.7 percent in 1981. U.S./CMG primary care participation will drop from 40.9 percent to 39.3 percent while FMG primary care participation will drop from 35.7 percent to 31 to 35 percent.

Of note is the impact of the magnitude of alternative FMG specialty shifts upon the availability of primary care physicians in 1990. More than 5,000 additional primary care physicians, about 1,400 general/family practitioners, 3,500 internists, and 200 pediatricians, may be available if FMG specialty shifts after GME do not exist. These 5,000 additional practitioners amount to nearly 14 percent of the FMG primary care physician supply and about 2 percent of the total primary care physicians supply when shifts are included.

Discussion

At this time it is difficult to say what the disaggregate impact of a change in the mix of country of origin of FMGs will be. Even though USFMGs have had their own unique location and practice patterns, it is difficult to predict whether they will continue to maintain these patterns as they increase in number and representation and as the numbers of USMGs increase and alien FMGs decrease. Moreover, it is difficult to predict whether the change in mix of donor nations of alien FMGs will have an impact on the disaggregate distributions. That is, will the new entrant aliens from the Americas locate and practice as the new entrant Asian aliens did before the mix changed?

Speculation is that market forces will still render the USFMG and the alien FMG a less desirable physician "commodity" than their USMG/CMG counterparts. Regardless of the mix, the FMG will continue to fill those specialty, location, and practice gaps left after USMG/CMGs make their choices as described in the previous chapter.

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